

TECHNOLOGY ASSESSMENT AND FORECAST REPORT

CHEMICAL CLASSES

1977 - December 1999



May 2000

U.S. PATENT AND TRADEMARK OFFICE
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A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

Technology Profile Report - CHEMICAL Classes

Explanation of Data

This Technology Profile Report profiles the patent activity for U.S. utility patents * granted between **1977** and **December 1999** in CHEMICAL technology discipline classes within the U.S. Patent Classification System (USPCS).

The report is generated by identifying appropriate Patent and Trademark Office (PTO) classes, i.e., those entirely or substantially pertinent to the technology discipline of interest. The patents in these classes are then included in the profile. This procedure results, in most cases, in the inclusion of the majority of patents relevant to the technology discipline and few, if any, patents which are not relevant. However, any patent listing provided should not be considered to be inclusive of all relevant patents, nor exclusive of all irrelevant patents.

Data Distribution By Date of Grant and By Date of Application

Parts A1 and A2

Part A1 distributes utility patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes patent GRANT data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data, as shown in the "**Pre 1986**" column, correspond to selected patents * in the data base which were granted during the period **1977 to 1985**.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 40% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for applications filed from **1997** to **DECEMBER 1999** are incomplete.** This is because a significant number of the applications filed from **1997** to **DECEMBER 1999**, which will ultimately become patents, were still pending in **DECEMBER 1999**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing

such as occurred in 1986 when the PTO issued fewer patents than would normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

"**Patents Granted By Date of Patent Application**", as shown in the "**Pre 1986**" column, correspond to patent grants in the report which were filed prior to **1986**.

Parts of the Report

Parts A1 and A2 present tables which show, by number and percent, the patent activity in the technology discipline. Part A1 presents data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted By Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Patent ownership information reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent ownership is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for the Foreign Government ownership category.

Part B is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received U.S. patents since **1977**.* Data line 1 for each listed organization ("Patents By Year of Grant") distributes counts of patent grants by year of grant. Data line 2 for each organization ("Patents By Year of Application") redistributes those same patent grants by year in which the patented applications were filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

* The term "patent", as used above, refers to "utility" patents. Other patent documents (i.e., design, plant and reissue patents, statutory invention registrations, defensive publications) are not included in this profile report.

** As of 12/31/99, utility patent application data are approximately 79% complete for utility patent applications filed in 1997 and 21% complete for applications filed in 1998. They are essentially complete for applications filed prior to 1997.

CHEMICAL, ELECTRICAL, MECHANICAL CLASSES

DECEMBER 1999

CHEMICAL	8	23	44	48	51	55	65	71	75	95	96	106	117	127
	136	148	149	156	159	162	196	201	202	203	204	205	208	209
	210	216	252	260	261	264	376	419	420	422	423	424	426	427
	428	429	430	435	436	438	442	501	502	504	507	508	510	512
	514	516	518	520	521	522	523	524	525	526	527	528	530	532
	534	536	540	544	546	548	549	552	554	556	558	560	562	564
	568	570	585	588	800	930	976	987						

The following subclasses are also Chemical:

134/1-42; 131/274-279; 505/100-126, 300-512, 725-785, 800-824, 951

ELECTRICAL	174	178	191	200	218	219	235	250	257	290	307	310	313	314
	315	318	320	322	323	324	326	327	329	330	331	332	333	334
	335	336	337	338	340	341	342	343	345	346	348	349	355	358
	360	361	362	363	364	365	367	368	369	370	371	372	373	375
	377	378	379	380	381	382	383	386	388	392	395	396	399	455
	503	505	700	701	702	704	705	706	707	708	709	710	711	712
	713	714	902											

The following subclasses are also Electrical:

84/600-746; 385/1-52; 359/1-195, 237-361, 558-590, 901-902; 968/876-977; 984/300-398

MECHANICAL	2	4	5	7		12	14	15	16		19	24	26	
	27	28	29	30	33	34	36	37	38	40	42	43	47	49
	52	53	54	56	57	59	60	62	63	66	68	69	70	
	72	73	74	76	79	81	82	83	84	86	87	89	91	92
	99	100	101	102	104	105	108	109	110	111	112	114	116	118
	119	122	123	124	125	126	128		131	132	134	135	137	138
	139	140	141	142	144	147	150	152	157	160	163	164	165	166
	168	169	171	172	173	175	177	180	181	182	184	185	186	187
	188	190	192	193	194	198	199	206	211	212	213	215	217	220
	221	222	223	224	225	226	227	228	229	231	232	234	236	237
	238	239	241	242	244	245	246	248	249	251	254	256	258	266
	267	269	270	271		273	276	277	278	279	280	281	283	285
	289	291	292	293	294	295	296	297	298	299	300	301	303	305
	312	347	351	352	353	356	359	366	374	384	385	400	401	402
	403	404	405	406	407	408	409	410	411	412	413	414	415	416
	417	418	425	431	432	433	434	439	440	441	445	446	449	450
	451	452	453	454	460	462	463	464	470	472	473	474	475	476
	477	482	483	492	493	494	600	601	602	604	606	607	623	901
	968	984												

The following subclasses are also Mechanical:

209/3.1-3.3, 44-44.4, 509-707, 900-942; 8/147-159

TECHNOLOGY ASSESSMENT AND FORECAST PROGRAM TECHNOLOGY DISCIPLINES FOR
U.S. PATENT CLASSIFICATION SYSTEM CLASSES AS OF DECEMBER 1999
CHEMICAL, ELECTRICAL, MECHANICAL

| Class |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2M | 76M | 148C | 213M | 279M | 348E | 409M | 476M | 602M |
| 4M | 79M | 149C | 215M | 280M | 349E | 410M | 477M | 604M |
| 5M | 81M | 150M | 216C | 281M | 351M | 411M | 482M | 606M |
| 7M | 82M | 152M | 217M | 283M | 352M | 412M | 483M | 607M |
| 8C* | 83M | 156C | 218E | 285M | 353M | 413M | 492M | 623M |
| 12M | 84M* | 157M | 219E | 289M | 355E | 414M | 493M | 700E |
| 14M | 86M | 159C | 220M | 290E | 356M | 415M | 494M | 701E |
| 15M | 87M | 160M | 221M | 291M | 358E | 416M | 501C | 702E |
| 16M | 89M | 162C | 222M | 292M | 359M* | 417M | 502C | 704E |
| 19M | 91M | 163M | 223M | 293M | 360E | 418M | 503E* | 705E |
| 23C | 92M | 164M | 224M | 294M | 361E | 419C | 504C | 706E |
| 24M | 95C | 165M | 225M | 295M | 362E | 420C | 505E* | 707E |
| 26M | 96C | 166M | 226M | 296M | 363E | 422C | 507C | 708E |
| 27M | 99M | 168M | 227M | 297M | 364E | 423C | 508C | 709E |
| 28M | 100M | 169M | 228M | 298M | 365E | 424C | 510C | 710E |
| 29M | 101M | 171M | 229M | 299M | 366M | 425M | 512C | 711E |
| 30M | 102M | 172M | 231M | 300M | 367E | 426C | 514C | 712E |
| 33M | 104M | 173M | 232M | 301M | 368E | 427C | 516C | 713E |
| 34M | 105M | 174E | 234M | 303M | 369E | 428C | 518C | 714E |
| 36M | 106C | 175M | 235E | 305M | 370E | 429C | 520C | 800C |
| 37M | 108M | 177M | 236M | 307E | 371E | 430C | 521C | 901M |
| 38M | 109M | 178E | 237M | 310E | 372E | 431M | 522C | 902E |
| 40M | 110M | 180M | 238M | 312M | 373E | 432M | 523C | 930C |
| 42M | 111M | 181M | 239M | 313E | 374M | 433M | 524C | 968M* |
| 43M | 112M | 182M | 241M | 314E | 375E | 434M | 525C | 976C |
| 44C | 114M | 184M | 242M | 315E | 376C | 435C | 526C | 984M* |
| 47M | 116M | 185M | 244M | 318E | 377E | 436C | 527C | 987C |
| 48C | 117C | 186M | 245M | 320E | 378E | 438C | 528C | |
| 49M | 118M | 187M | 246M | 322E | 379E | 439M | 530C | |
| 51C | 119M | 188M | 248M | 323E | 380E | 440M | 532C | |
| 52M | 122M | 190M | 249M | 324E | 381E | 441M | 534C | |
| 53M | 123M | 191E | 250E | 326E | 382E | 442C | 536C | |
| 54M | 124M | 192M | 251M | 327E | 383E | 445M | 540C | |
| 55C | 125M | 193M | 252C | 329E | 384M | 446M | 544C | |
| 56M | 126M | 194M | 254M | 330E | 385M* | 449M | 546C | |
| 57M | 127C | 196C | 256M | 331E | 386E | 450M | 548C | |
| 59M | 128M | 198M | 257E | 332E | 388E | 451M | 549C | |
| 60M | 131M* | 199M | 258M | 333E | 392E | 452M | 552C | |
| 62M* | 132M | 200E | 260C | 334E | 395E | 453M | 554C | |
| 63M | 134M* | 201C | 261C | 335E | 396E | 454M | 556C | |
| 65C | 135M | 202C | 264C | 336E | 399E | 455E | 558C | |
| 66M | 136C | 203C | 266M | 337E | 400M | 460M | 560C | |
| 68M | 137M | 204C | 267M | 338E | 401M | 462M | 562C | |
| 69M | 138M | 205C | 269M | 340E | 402M | 463M | 564C | |
| 70M | 139M | 206M | 270M | 341E | 403M | 464M | 568C | |
| 71C | 140M | 208C | 271M | 342E | 404M | 470M | 570C | |
| 72M | 141M | 209C* | 273M | 343E | 405M | 472M | 585C | |
| 73M | 142M | 210C | 276M | 345E | 406M | 473M | 588C | |
| 74M | 144M | 211M | 277M | 346E | 407M | 474M | 600M | |
| 75C | 147M | 212M | 278M | 347M | 408M | 475M | 601M | |

*8/147-159 are mechanical

*84/600-746 are electrical

*131/274-279 are chemical

*134/1-42 are chemical

*209/3.1-3.3, 44-44.4, 509-707, 900-942 are mechanical

*359/1-195, 237-361, 558-590, 901-902 are electrical

*385/1-52 are electrical

*505/100-126, 300-512, 725-785, 800-824, 951 are chemical

*968/876-977 are electrical

*984/300-398 are electrical

May 19, 2000

cem1299.w60

USPTO, IPD-TAF Branch

Part A1
Patent Grants as Distributed By Year of Patent Grant

----- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 1999) -----

----- PERCENT OF PATENTS -----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
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Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Origin	57	53	53	52	51	50	51	53	52	53	52	54	54	53	53	54
Foreign Origin	43	47	47	48	49	50	49	47	48	47	48	46	46	47	47	46
JAPAN	13	19	19	20	20	21	21	21	22	22	21	19	18	18	18	18
GERMANY	11	11	10	11	10	10	10	9	8	8	8	8	8	7	9	
UNITED KINGDOM	4	4	3	4	4	4	4	3	3	3	3	3	3	3	3	4
FRANCE	3	3	4	4	4	4	4	3	3	3	3	3	3	3	3	3
SWITZERLAND	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2
CANADA	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2
ITALY	1	1	1	1	2	2	2	1	2	2	1	1	1	1	1	1
NETHERLANDS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SWEDEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
BELGIUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TAIWAN											1	1	1	1	2	1
SOUTH KOREA										1	1	1	1	1	2	1
AUSTRALIA													1	1	0	
FINLAND															0	
AUSTRIA															0	
DENMARK													1	1	1	0
ISRAEL															0	
U.S.S.R.	1														0	
HUNGARY															0	
SPAIN															0	
NORWAY															0	
SOUTH AFRICA															0	
INDIA															0	
MEXICO															0	
CZECHOSLOVAKIA															0	
RUSSIAN FEDERATION															0	
CHINA P.REP.															0	
IRELAND															0	
NEW ZEALAND															0	
BRAZIL															0	
VENEZUELA															0	
SINGAPORE															0	
POLAND															0	
BULGARIA															0	
LUXEMBOURG															0	
ARGENTINA															0	
Others (86)															0	

Ownership:

U.S. Corporations	54	51	50	49	49	48	49	49	49	50	48	50	51	50	50	51
U.S. Government	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
U.S. Individuals	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Foreign Corporations	35	40	41	42	42	43	42	41	42	42	43	41	41	41	41	40
Foreign Government	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Foreign Individuals	3	3	3	3	3	3	3	2	2	2	3	2	2	2	2	3

Part A2
Patent Grants as Distributed By Year of Patent Application

CHEMICAL CLASSES (12-31-99)

----- Technology Assessment and Forecast Report -----

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Part B

Ranked Listing of Organizations with PATENT GRANTS
As Distributed By Year of Patent Grant
and As Distributed By Year of Patent Application

----- Technology Assessment and Forecast Report -----

CHEMICAL CLASSES (12-31-99)

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---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 1999) ---- Ranked List of Organizations with 200 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

BAYER AKTIENGESELLSCHAFT

Patents By Year of Grant:	3440	381	354	428	454	476	477	465	426	334	321	316	345	371	328	8916
Patents By Year of Application:	4178	394	368	430	498	474	380	402	342	327	369	372	290	84	8	8916

E. I. DU PONT DE NEMOURS AND COMPANY

Patents By Year of Grant:	2436	269	337	308	347	388	470	490	476	399	387	338	286	356	313	7600
Patents By Year of Application:	2961	329	323	350	455	516	444	411	383	369	371	315	285	83	5	7600

BASF AKTIENGESELLSCHAFT

Patents By Year of Grant:	1944	233	239	273	338	383	366	376	344	309	296	315	273	395	404	6488
Patents By Year of Application:	2399	227	309	376	372	370	320	304	317	321	366	322	357	124	4	6488

GENERAL ELECTRIC COMPANY

Patents By Year of Grant:	2462	250	252	242	300	252	301	360	301	295	280	300	227	227	236	6285
Patents By Year of Application:	2917	247	262	281	323	303	301	280	296	304	285	235	187	61	3	6285

CIBA-GEIGY CORPORATION

Patents By Year of Grant:	2652	242	278	274	331	392	395	308	319	290	264	267	232	15	3	6262
Patents By Year of Application:	3133	290	314	367	343	336	303	281	280	303	272	39	1	0	0	6262

DOW CHEMICAL COMPANY

Patents By Year of Grant:	2296	331	415	387	392	368	296	287	304	247	205	170	144	160	132	6134
Patents By Year of Application:	2968	423	336	359	354	271	260	248	239	202	200	140	106	28	0	6134

HOECHST AKTIENGESELLSCHAFT

Patents By Year of Grant:	1954	211	220	209	239	258	268	318	331	308	287	327	337	314	147	5728
Patents By Year of Application:	2378	224	215	279	278	271	269	342	303	340	466	203	147	13	0	5728

EASTMAN KODAK COMPANY

Patents By Year of Grant:	1506	112	111	176	278	286	331	289	445	374	349	306	309	428	400	5700
Patents By Year of Application:	1681	157	217	311	316	360	339	417	335	306	288	454	362	145	12	5700

FUJI PHOTO FILM CO., LTD

Patents By Year of Grant:	1350	251	252	281	386	383	403	342	392	347	301	295	224	245	235	5687
Patents By Year of Application:	1827	298	364	377	385	366	366	323	299	289	274	266	213	39	1	5687

MOBIL OIL CORP.

Patents By Year of Grant:	1650	221	191	158	257	260	301	240	230	235	162	143	80	58	61	4247
Patents By Year of Application:	2030	150	230	255	290	245	254	231	184	177	111	38	36	14	2	4247

MINNESOTA MINING AND MANUFACTURING COMPANY

Patents By Year of Grant:	867	131	129	149	204	180	184	219	271	290	336	335	365	310	216	4186
Patents By Year of Application:	1122	141	185	191	169	236	230	269	306	359	457	323	180	18	0	4186

Technology Assessment and Forecast Report

CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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PHILLIPS PETROLEUM COMPANY

Patents By Year of Grant:	1898	177	162	120	121	109	142	159	183	136	96	80	63	63	60	3569
Patents By Year of Application:	2239	126	99	111	105	170	156	159	106	83	107	46	47	14	1	3569

SHELL OIL COMPANY

Patents By Year of Grant:	1133	126	107	154	302	228	230	228	185	159	118	92	99	125	110	3396
Patents By Year of Application:	1334	140	213	241	220	245	200	171	143	125	117	125	86	36	0	3396

EXXON RESEARCH + ENGINEERING CO.

Patents By Year of Grant:	1822	192	159	97	119	124	125	107	105	116	78	66	64	97	118	3389
Patents By Year of Application:	2169	104	109	94	114	122	114	103	94	80	88	67	91	38	2	3389

MERCK + CO., INC.

Patents By Year of Grant:	1206	101	121	121	169	131	150	157	211	159	119	122	159	176	212	3314
Patents By Year of Application:	1451	104	137	120	129	161	191	217	124	152	152	132	183	58	3	3314

PROCTER + GAMBLE COMPANY

Patents By Year of Grant:	699	53	91	70	111	99	103	124	116	144	174	247	306	347	412	3096
Patents By Year of Application:	839	78	100	88	103	113	115	128	178	245	332	376	308	87	6	3096

INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant:	891	105	104	94	95	81	116	119	154	186	163	206	194	239	346	3093
Patents By Year of Application:	1066	110	89	86	106	86	193	177	151	211	267	234	264	48	5	3093

IMPERIAL CHEMICAL INDUSTRIES PLC

Patents By Year of Grant:	1327	94	93	149	136	154	154	172	206	113	81	56	50	54	38	2877
Patents By Year of Application:	1539	129	142	148	174	138	170	149	82	62	70	42	21	10	1	2877

AMERICAN CYANAMID COMPANY

Patents By Year of Grant:	1359	83	91	89	104	125	96	112	111	126	77	100	102	103	105	2783
Patents By Year of Application:	1563	101	101	85	80	111	104	113	117	100	170	41	64	30	3	2783

MONSANTO COMPANY, INC.

Patents By Year of Grant:	1397	102	85	64	85	78	124	122	99	73	71	77	95	69	80	2621
Patents By Year of Application:	1599	72	56	91	114	112	93	81	77	78	107	68	57	16	0	2621

SUMITOMO CHEMICAL COMPANY, LIMITED

Patents By Year of Grant:	843	82	96	112	138	110	139	129	143	160	134	132	117	138	125	2598
Patents By Year of Application:	1015	111	121	124	137	119	130	153	142	166	138	120	93	29	0	2598

UOP

Patents By Year of Grant:	1204	54	68	67	157	119	98	100	111	98	99	89	56	81	99	2500
Patents By Year of Application:	1300	79	125	134	93	98	96	118	84	121	75	70	78	29	0	2500

Technology Assessment and Forecast Report

CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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BRISTOL-MYERS SQUIBB COMPANY

Patents By Year of Grant:	989	90	117	105	94	102	110	125	112	96	91	92	119	116	108	2466
Patents By Year of Application:	1187	105	97	88	104	138	109	116	124	96	129	77	65	26	5	2466

ELI LILLY AND COMPANY

Patents By Year of Grant:	866	81	83	67	73	71	63	59	74	67	138	241	221	172	184	2460
Patents By Year of Application:	1064	60	50	62	59	61	61	90	142	145	353	92	156	59	6	2460

CANON KABUSHIKI KAISHA

Patents By Year of Grant:	259	97	101	86	137	133	114	148	169	172	175	224	207	212	195	2429
Patents By Year of Application:	445	114	97	128	130	152	157	191	163	231	288	173	131	27	2	2429

HITACHI, LTD

Patents By Year of Grant:	730	134	113	110	123	100	98	119	125	122	110	106	95	123	120	2328
Patents By Year of Application:	992	101	108	118	128	117	124	93	117	116	125	95	76	17	1	2328

XEROX CORPORATION

Patents By Year of Grant:	600	49	53	55	86	79	90	138	153	164	136	171	159	165	180	2278
Patents By Year of Application:	692	46	70	80	112	127	161	139	147	137	156	168	161	80	2	2278

PPG INDUSTRIES INC.

Patents By Year of Grant:	1204	108	104	103	101	85	81	65	73	56	47	42	64	79	37	2249
Patents By Year of Application:	1383	118	104	86	77	78	74	46	55	55	66	60	46	1	0	2249

HOFFMANN-LA ROCHE INC.

Patents By Year of Grant:	1059	83	82	59	89	76	77	70	84	81	101	104	78	71	69	2183
Patents By Year of Application:	1223	69	69	91	83	77	57	89	84	116	94	53	54	21	3	2183

ALLIED-SIGNAL INC.

Patents By Year of Grant:	822	99	85	116	119	110	105	158	112	105	77	76	49	58	70	2161
Patents By Year of Application:	1017	94	107	121	115	130	146	92	89	57	64	74	39	15	1	2161

UNION CARBIDE CORPORATION

Patents By Year of Grant:	1590	169	139	121	100	21	6	0	0	0	0	0	0	0	0	2146
Patents By Year of Application:	1892	119	83	37	15	0	0	0	0	0	0	0	0	0	0	2146

TOSHIBA CORPORATION

Patents By Year of Grant:	444	93	105	82	112	96	110	115	140	101	119	118	117	165	182	2099
Patents By Year of Application:	619	83	98	119	114	112	125	120	106	135	150	159	134	24	1	2099

UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant:	923	108	124	114	101	96	73	105	71	66	46	27	27	22	34	1937
Patents By Year of Application:	1158	97	75	98	94	89	90	67	55	31	25	25	28	5	0	1937

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----- Organizational Patenting

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	Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999														TOTAL
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AMOCO CORPORATION

Patents By Year of Grant:	756	59	82	115	142	139	105	152	101	66	42	52	48	55	10	1924
Patents By Year of Application:	918	88	123	147	127	140	103	66	57	51	52	32	19	1	0	1924

UPJOHN COMPANY

Patents By Year of Grant:	1579	64	25	15	27	24	19	30	30	23	21	32	21	1	1	1912
Patents By Year of Application:	1671	24	20	18	22	22	30	27	29	25	22	2	0	0	0	1912

TEXACO INC.

Patents By Year of Grant:	946	103	103	65	95	84	67	78	69	61	71	46	14	25	21	1848
Patents By Year of Application:	1116	98	84	77	72	71	77	65	62	55	30	19	15	7	0	1848

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Patents By Year of Grant:	322	34	48	50	66	64	87	117	150	121	155	157	139	165	168	1843
Patents By Year of Application:	404	49	60	61	91	101	141	131	158	158	173	157	132	27	0	1843

PFIZER INC.

Patents By Year of Grant:	688	71	65	59	77	80	88	79	64	72	75	81	99	114	109	1821
Patents By Year of Application:	808	66	54	79	92	91	68	84	79	110	101	66	94	28	1	1821

WESTINGHOUSE ELECTRIC CORP.

Patents By Year of Grant:	614	105	212	143	134	109	95	86	70	72	52	35	21	20	5	1773
Patents By Year of Application:	941	118	114	105	111	94	61	64	63	49	27	17	9	0	0	1773

HOECHST CELANESE CORPORATION

Patents By Year of Grant:	503	61	63	96	112	177	115	122	99	88	71	70	72	63	22	1734
Patents By Year of Application:	626	98	112	126	135	123	108	85	72	75	88	54	31	1	0	1734

DOW CORNING CORPORATION

Patents By Year of Grant:	341	64	50	75	97	115	129	139	93	123	103	102	84	103	102	1720
Patents By Year of Application:	424	79	76	102	136	134	112	99	120	114	104	102	81	35	2	1720

KONICA CORPORATION

Patents By Year of Grant:	379	76	63	77	91	110	129	98	126	120	98	76	62	91	83	1679
Patents By Year of Application:	513	59	88	105	103	133	112	98	92	113	72	86	84	21	0	1679

AT&T CORP.

Patents By Year of Grant:	859	72	53	44	54	65	76	83	84	91	88	40	1	0	0	1610
Patents By Year of Application:	965	50	58	53	78	73	88	87	94	54	10	0	0	0	0	1610

UNIVERSITY OF CALIFORNIA, THE REGENTS OF

Patents By Year of Grant:	162	29	35	32	43	32	54	49	62	88	118	157	182	243	287	1573
Patents By Year of Application:	257	30	40	31	51	60	66	71	153	191	278	179	134	30	2	1573

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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HENKEL KOMMANDITGESELLSCHAFT AUF AKTIEN(HENKEL KGAA)

Patents By Year of Grant:	407	49	81	93	116	104	57	40	64	93	95	100	65	79	80	1523
Patents By Year of Application:	529	81	115	111	79	30	55	84	82	111	80	97	58	11	0	1523

WARNER-LAMBERT COMPANY

Patents By Year of Grant:	351	89	107	105	105	101	105	83	82	66	69	59	76	51	74	1523
Patents By Year of Application:	526	120	97	98	88	99	75	60	75	85	88	31	44	35	2	1523

CHEVRON RESEARCH & TECHNOLOGY CO.

Patents By Year of Grant:	923	124	77	65	45	39	52	57	52	52	22	3	5	0	1	1517
Patents By Year of Application:	1119	78	45	27	40	68	38	59	34	6	2	1	0	0	0	1517

SHIN ETSU CHEMICAL CO., LTD.

Patents By Year of Grant:	173	38	47	60	49	58	107	131	161	150	128	122	88	90	91	1493
Patents By Year of Application:	232	58	47	59	97	141	121	148	127	147	133	89	71	23	0	1493

ROHM AND HAAS COMPANY

Patents By Year of Grant:	574	33	22	18	32	32	48	64	114	123	115	95	62	69	81	1482
Patents By Year of Application:	642	26	20	23	48	73	96	103	118	94	91	54	60	34	0	1482

SIEMENS AKTIENGESELLSCHAFT

Patents By Year of Grant:	511	54	47	56	91	69	47	48	66	65	69	51	61	106	134	1475
Patents By Year of Application:	602	50	67	77	67	54	54	63	61	68	74	92	110	35	1	1475

TEXAS INSTRUMENTS, INCORPORATED

Patents By Year of Grant:	210	48	54	32	105	65	78	95	100	112	134	112	116	84	104	1449
Patents By Year of Application:	303	45	64	95	71	95	92	110	105	167	139	78	71	14	0	1449

ABBOTT LABORATORIES

Patents By Year of Grant:	353	17	21	26	30	42	55	93	91	99	82	130	159	122	122	1442
Patents By Year of Application:	392	30	36	44	65	58	98	91	98	110	222	112	69	17	0	1442

UNITED STATES OF AMERICA, NAVY

Patents By Year of Grant:	566	48	39	24	15	41	72	78	89	98	68	62	58	76	93	1427
Patents By Year of Application:	694	23	20	36	52	80	72	86	93	61	70	63	52	23	2	1427

W. R. GRACE & CO.-CONN.

Patents By Year of Grant:	439	37	33	52	85	87	87	108	102	105	72	68	58	46	23	1402
Patents By Year of Application:	504	52	76	91	89	90	119	82	96	58	90	35	16	4	0	1402

MOTOROLA, INC.

Patents By Year of Grant:	147	30	29	54	51	45	61	77	101	96	128	126	148	162	140	1395
Patents By Year of Application:	200	34	53	36	62	75	90	103	96	150	173	163	137	23	0	1395

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
TAKEDA CHEMICAL INDUSTRIES LTD.																
Patents By Year of Grant:	404	54	55	56	77	82	48	65	90	66	69	92	75	69	76	1378
Patents By Year of Application:	529	53	67	72	80	60	72	66	80	88	90	70	44	5	2	1378
CORNING INCORPORATED																
Patents By Year of Grant:	584	37	40	59	45	63	48	63	70	78	43	54	46	40	51	1321
Patents By Year of Application:	655	46	47	55	56	61	60	74	59	68	52	32	39	16	1	1321
L'OREAL S.A.																
Patents By Year of Grant:	256	23	37	30	68	55	68	52	59	43	47	90	148	146	199	1321
Patents By Year of Application:	335	41	50	62	48	53	51	54	49	90	181	141	130	33	3	1321
MITSUBISHI DENKI KABUSHIKI KAISHA																
Patents By Year of Grant:	118	30	49	60	62	82	101	116	140	100	99	85	76	85	113	1316
Patents By Year of Application:	189	47	61	78	107	99	141	107	92	102	105	89	81	18	0	1316
GOODYEAR TIRE + RUBBER COMPANY																
Patents By Year of Grant:	591	34	44	48	45	49	56	47	52	41	41	47	63	69	51	1278
Patents By Year of Application:	661	37	44	50	50	55	50	46	32	42	59	65	65	22	0	1278
MITSUI TOATSU CHEMICALS INC.																
Patents By Year of Grant:	241	28	43	57	76	89	81	123	132	99	89	76	69	43	2	1248
Patents By Year of Application:	305	58	72	77	108	109	104	104	94	80	95	35	7	0	0	1248
COLGATE-PALMOLIVE COMPANY																
Patents By Year of Grant:	424	35	43	47	77	40	51	43	44	45	56	64	65	95	118	1247
Patents By Year of Application:	497	63	47	50	58	40	52	34	53	79	45	88	90	39	12	1247
OLIN CORPORATION																
Patents By Year of Grant:	643	50	37	38	46	42	70	78	58	56	23	29	19	10	10	1209
Patents By Year of Application:	720	41	41	39	59	80	59	56	37	33	23	12	8	1	0	1209
LEVER BROS. CO., DIVISION OF CONOPCO, INC.																
Patents By Year of Grant:	480	51	46	42	45	54	53	48	41	51	67	53	50	59	58	1198
Patents By Year of Application:	574	32	46	52	57	53	46	34	69	50	63	68	49	5	0	1198
AIR PRODUCTS AND CHEMICALS, INC.																
Patents By Year of Grant:	255	44	50	50	81	79	96	67	86	99	60	58	44	62	60	1191
Patents By Year of Application:	330	48	75	91	72	82	71	97	72	68	59	49	59	18	0	1191
EXXON CHEMICALS PATENTS INC.																
Patents By Year of Grant:	0	8	26	30	63	71	108	88	110	111	122	102	111	118	106	1174
Patents By Year of Application:	26	45	56	82	84	110	77	93	133	103	164	81	102	18	0	1174

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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NEC CORPORATION

Patents By Year of Grant:	54	14	22	16	19	15	20	30	39	97	107	124	147	185	264	1153
Patents By Year of Application:	87	14	16	19	22	22	43	87	72	158	169	180	211	52	1	1153

ETHYL CORPORATION

Patents By Year of Grant:	407	73	40	49	83	105	117	93	84	49	8	11	14	10	8	1151
Patents By Year of Application:	521	45	49	99	116	97	89	67	25	5	17	9	8	4	0	1151

UNITED STATES OF AMERICA, HEALTH & HUMAN SERVICES

Patents By Year of Grant:	159	22	29	22	26	30	31	60	71	87	82	97	138	159	132	1145
Patents By Year of Application:	219	28	31	43	55	65	68	111	104	149	172	48	48	4	0	1145

STAUFFER CHEMICAL COMPANY

Patents By Year of Grant:	868	74	91	69	36	0	2	0	0	0	0	0	0	0	0	1140
Patents By Year of Application:	1018	71	38	12	1	0	0	0	0	0	0	0	0	0	0	1140

SANDOZ LTD.

Patents By Year of Grant:	521	42	51	53	58	34	49	37	45	40	41	83	52	20	10	1136
Patents By Year of Application:	620	49	48	45	41	42	47	36	45	63	76	16	8	0	0	1136

AMERICAN HOME PRODUCTS CORPORATION

Patents By Year of Grant:	383	33	45	63	71	61	44	55	63	31	58	95	34	48	46	1130
Patents By Year of Application:	445	56	68	43	62	43	59	57	43	72	91	35	30	25	1	1130

U.S. PHILIPS CORPORATION

Patents By Year of Grant:	438	42	60	52	59	68	59	39	42	32	39	34	32	56	62	1114
Patents By Year of Application:	519	68	46	64	60	50	44	37	33	36	45	55	46	11	0	1114

INTERNATIONAL FLAVORS + FRAGRANCES INC

Patents By Year of Grant:	728	74	38	22	31	36	34	22	20	25	21	17	12	13	3	1096
Patents By Year of Application:	817	35	23	28	30	29	28	13	29	24	15	16	8	1	0	1096

SUMITOMO ELECTRIC INDUSTRIES CO., LTD.

Patents By Year of Grant:	132	35	40	39	45	52	41	59	112	102	89	78	84	79	85	1072
Patents By Year of Application:	207	37	39	52	49	53	79	131	75	96	129	55	59	11	0	1072

ASAHI KASEI KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	472	42	46	46	43	33	31	31	54	49	28	27	24	48	55	1029
Patents By Year of Application:	562	42	39	38	43	30	50	37	26	36	25	39	50	12	0	1029

FUJITSU LIMITED

Patents By Year of Grant:	164	26	26	22	34	36	45	54	67	67	83	85	83	92	98	982
Patents By Year of Application:	210	22	29	38	43	56	71	58	90	93	114	80	64	14	0	982

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	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

SONY CORPORATION

Patents By Year of Grant:	118	22	32	15	17	11	17	22	62	83	87	95	108	118	172	979
Patents By Year of Application:	172	15	14	12	19	20	45	101	79	91	134	137	107	31	2	979

MICRON TECHNOLOGY, INC.

Patents By Year of Grant:	0	0	0	0	5	6	40	59	88	43	35	36	127	199	334	972
Patents By Year of Application:	0	0	0	7	10	58	69	82	34	38	157	237	209	66	5	972

SCHERING AKTIENGESELLSCHAFT

Patents By Year of Grant:	350	46	35	37	48	70	39	50	37	30	45	30	42	52	43	954
Patents By Year of Application:	438	53	41	53	49	53	35	35	43	42	58	30	18	5	1	954

G. D. SEARLE & CO.

Patents By Year of Grant:	212	23	32	34	33	34	38	46	92	56	90	63	75	59	61	948
Patents By Year of Application:	270	31	31	39	38	33	66	87	73	83	103	45	31	16	2	948

FMC CORPORATION

Patents By Year of Grant:	425	36	29	39	36	40	37	30	38	35	28	39	37	47	36	932
Patents By Year of Application:	486	37	36	32	44	28	44	25	34	43	43	35	38	7	0	932

MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG

Patents By Year of Grant:	203	25	39	46	51	30	34	48	78	57	65	50	60	93	52	931
Patents By Year of Application:	269	56	51	36	47	41	64	56	55	66	72	77	32	9	0	931

NALCO CHEMICAL COMPANY

Patents By Year of Grant:	282	26	49	51	53	52	45	61	53	63	66	29	34	31	32	927
Patents By Year of Application:	328	41	66	57	48	46	59	56	68	46	45	33	25	9	0	927

DEGUSSA AKTIENGESELLSCHAFT

Patents By Year of Grant:	216	44	56	48	50	48	59	50	57	60	39	48	43	58	47	923
Patents By Year of Application:	294	49	44	63	45	60	45	67	50	47	47	55	49	8	0	923

BOEHRINGER MANNHEIM G.M.B.H.

Patents By Year of Grant:	225	23	32	36	62	50	53	52	47	56	55	48	59	69	38	905
Patents By Year of Application:	299	39	53	61	54	44	53	41	51	62	65	53	26	4	0	905

ATLANTIC RICHFIELD COMPANY

Patents By Year of Grant:	558	87	82	37	21	14	8	10	17	23	9	5	8	6	13	898
Patents By Year of Application:	699	61	21	17	9	8	10	24	16	7	6	10	5	5	0	898

KAO KABUSHIKI KAISHA (KAO CORPORATION)

Patents By Year of Grant:	28	23	39	42	57	50	58	75	61	65	64	57	87	108	84	898
Patents By Year of Application:	84	54	44	53	57	54	83	69	56	67	92	95	72	17	1	898

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	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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B. F. GOODRICH CO.

Patents By Year of Grant:	437	28	46	46	48	50	55	48	47	28	11	13	10	13	15	895
Patents By Year of Application:	508	34	48	52	75	37	35	36	18	13	16	10	10	3	0	895

STANDARD OIL COMPANY

Patents By Year of Grant:	459	57	74	60	58	42	28	35	19	11	9	7	15	10	11	895
Patents By Year of Application:	591	55	50	46	30	35	26	10	3	10	15	10	8	6	0	895

UNITED TECHNOLOGIES CORPORATION

Patents By Year of Grant:	346	45	38	36	50	37	29	44	41	61	35	38	33	23	32	888
Patents By Year of Application:	425	45	55	40	32	34	46	49	39	30	41	22	23	7	0	888

UNITED STATES OF AMERICA, ARMY

Patents By Year of Grant:	392	29	43	17	42	31	43	37	38	31	30	22	43	39	40	877
Patents By Year of Application:	466	27	21	27	37	42	31	32	30	42	45	40	25	12	0	877

AGENCY OF INDUSTRIAL SCIENCE & TECHNOLOGY

Patents By Year of Grant:	216	27	45	55	67	62	62	49	48	36	28	39	55	47	39	875
Patents By Year of Application:	271	61	60	70	53	52	47	42	29	35	56	52	38	7	2	875

MITSUI PETROCHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	168	18	21	23	43	77	90	63	73	66	51	39	70	49	10	861
Patents By Year of Application:	213	17	33	95	82	61	56	59	54	56	76	42	17	0	0	861

INSTITUT FRANCAIS DU PETROLE

Patents By Year of Grant:	257	16	25	35	24	29	47	32	37	47	45	48	53	82	74	851
Patents By Year of Application:	303	23	31	29	34	37	38	47	45	53	77	58	61	15	0	851

SCHERING CORP.

Patents By Year of Grant:	238	22	25	40	50	30	51	32	31	27	48	29	68	75	81	847
Patents By Year of Application:	297	47	40	35	34	39	28	37	42	52	98	39	48	10	1	847

UNITED STATES OF AMERICA, DEPARTMENT OF AGRICULTURE

Patents By Year of Grant:	345	18	18	27	35	35	35	35	44	29	38	30	38	62	58	847
Patents By Year of Application:	390	21	34	36	41	37	43	30	31	36	53	50	36	8	1	847

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	231	33	41	39	52	46	49	47	53	36	28	51	41	43	56	846
Patents By Year of Application:	323	41	52	47	55	39	37	42	47	59	48	27	28	1	0	846

MILES INC.

Patents By Year of Grant:	299	23	45	46	44	35	30	85	101	74	49	1	5	0	0	837
Patents By Year of Application:	392	37	44	28	37	52	91	74	53	24	5	0	0	0	0	837

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	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
UNION OIL COMPANY OF CALIFORNIA																
Patents By Year of Grant:	281	56	46	60	65	52	77	66	36	32	18	7	12	10	5	823
Patents By Year of Application:	401	56	49	65	66	53	47	30	23	13	11	3	6	0	0	823
OWENS-CORNING FIBERGLAS CORPORATION																
Patents By Year of Grant:	456	37	33	27	23	13	12	13	8	19	10	28	49	48	45	821
Patents By Year of Application:	522	26	19	24	9	15	9	10	14	33	44	53	35	8	0	821
KUREHA CHEMICAL INDUSTRY CO., LTD.																
Patents By Year of Grant:	310	37	48	50	48	52	30	31	31	31	37	41	36	22	6	810
Patents By Year of Application:	395	50	43	47	33	32	30	29	36	41	46	16	11	1	0	810
ROUSSEL-UCLAF																
Patents By Year of Grant:	327	26	30	24	42	32	40	42	40	37	57	34	26	39	8	804
Patents By Year of Application:	384	29	35	40	32	44	27	47	44	41	44	28	9	0	0	804
BASF CORP.																
Patents By Year of Grant:	0	18	38	37	47	34	41	49	81	58	66	86	77	90	79	801
Patents By Year of Application:	59	22	51	38	38	41	68	72	57	61	133	75	69	17	0	801
FORD MOTOR COMPANY																
Patents By Year of Grant:	382	35	23	27	27	17	22	40	49	40	28	35	27	18	19	789
Patents By Year of Application:	435	22	36	15	19	40	46	38	33	35	26	19	19	6	0	789
BEECHAM GROUP P.L.C.																
Patents By Year of Grant:	454	34	35	28	49	40	37	34	29	15	8	4	5	6	1	779
Patents By Year of Application:	529	44	34	32	44	36	19	14	13	4	9	1	0	0	0	779
RICOH COMPANY, LTD.																
Patents By Year of Grant:	172	33	34	30	41	40	41	50	49	44	40	41	48	52	63	778
Patents By Year of Application:	235	37	28	42	42	53	43	49	35	52	54	43	51	14	0	778
NIPPON STEEL CORP.																
Patents By Year of Grant:	231	26	25	32	58	41	42	32	46	34	36	41	52	44	32	772
Patents By Year of Application:	274	34	43	42	33	57	38	41	38	39	56	43	30	4	0	772
RHONE-POULENC CHIMIE																
Patents By Year of Grant:	16	5	9	22	48	73	121	75	53	59	46	43	70	79	48	767
Patents By Year of Application:	31	6	51	82	106	93	66	46	45	57	80	58	42	4	0	767
TORAY INDUSTRIES INC.																
Patents By Year of Grant:	253	38	31	33	30	33	30	33	39	36	35	29	55	40	52	767
Patents By Year of Application:	314	31	35	38	29	35	30	36	45	42	39	48	35	10	0	767

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GENERAL MOTORS CORPORATION

Patents By Year of Grant:	271	31	36	29	44	41	28	49	49	40	35	34	31	24	20	762
Patents By Year of Application:	323	33	33	50	24	37	50	56	38	34	32	24	23	5	0	762

HERCULES INCORPORATED

Patents By Year of Grant:	294	39	45	26	40	30	51	33	25	29	24	31	33	29	22	751
Patents By Year of Application:	361	36	39	43	41	40	34	23	19	36	33	29	11	6	0	751

TEIJIN LIMITED

Patents By Year of Grant:	273	21	25	36	32	28	25	27	51	37	40	32	43	34	35	739
Patents By Year of Application:	322	42	30	23	21	36	41	30	32	52	49	30	24	7	0	739

SMITHKLINE BECKMAN CORPORATION

Patents By Year of Grant:	425	19	37	44	46	16	7	20	15	19	24	18	16	19	11	736
Patents By Year of Application:	485	40	37	22	17	11	20	27	14	16	26	12	7	2	0	736

POLAROID CORPORATION

Patents By Year of Grant:	414	38	25	19	24	11	10	14	21	24	31	32	30	20	17	730
Patents By Year of Application:	473	21	26	16	8	9	26	14	28	32	32	23	21	1	0	730

FUJISAWA PHARMACEUTICAL CO., LTD.

Patents By Year of Grant:	250	40	34	34	36	51	35	36	47	37	18	31	35	24	21	729
Patents By Year of Application:	339	33	26	36	38	49	32	37	26	33	34	22	16	8	0	729

MITSUBISHI GAS-CHEMICAL COMPANY, INC.

Patents By Year of Grant:	212	15	17	17	23	43	47	42	43	47	45	33	33	43	60	720
Patents By Year of Application:	242	20	23	30	44	49	41	41	42	39	38	49	39	21	2	720

AGFA-GEVAERT N.V.

Patents By Year of Grant:	170	8	11	12	28	12	25	22	37	43	65	59	79	67	76	714
Patents By Year of Application:	184	14	20	21	14	28	35	30	46	67	74	93	62	24	2	714

ALUMINUM COMPANY OF AMERICA

Patents By Year of Grant:	230	41	31	51	46	41	48	38	42	28	21	24	19	26	27	713
Patents By Year of Application:	308	45	45	51	39	44	35	28	19	24	31	20	19	5	0	713

UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Patents By Year of Grant:	254	31	31	17	31	29	36	45	45	38	34	31	28	30	32	712
Patents By Year of Application:	303	30	23	35	32	40	39	48	34	40	34	26	23	4	1	712

UNIVERSITY OF TEXAS

Patents By Year of Grant:	32	12	13	12	26	37	61	56	66	71	62	61	61	70	64	704
Patents By Year of Application:	70	25	37	38	52	56	55	71	76	75	87	31	26	4	1	704

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	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

RCA CORPORATION

Patents By Year of Grant:	577	54	43	15	1	0	0	0	0	0	0	0	0	0	0	690
Patents By Year of Application:	661	26	3	0	0	0	0	0	0	0	0	0	0	0	0	690

UNITED STATES OF AMERICA, AIR FORCE

Patents By Year of Grant:	296	16	32	28	38	31	33	31	28	27	26	32	23	16	28	685
Patents By Year of Application:	344	22	31	41	27	37	29	26	24	27	28	22	18	9	0	685

NGK INSULATORS LTD.

Patents By Year of Grant:	95	21	23	33	65	36	39	46	68	36	32	39	40	46	63	682
Patents By Year of Application:	141	29	45	45	43	48	50	58	30	36	47	51	45	14	0	682

BECTON, DICKINSON AND COMPANY

Patents By Year of Grant:	97	19	34	16	51	34	29	29	20	43	35	60	85	77	52	681
Patents By Year of Application:	160	22	34	40	21	27	29	28	57	62	73	61	58	8	1	681

KANEKA FUCHI CHEMICAL INDUSTRY CO., LTD.

Patents By Year of Grant:	172	38	37	45	46	45	51	34	35	44	25	25	29	31	18	675
Patents By Year of Application:	247	37	50	42	53	38	37	36	32	32	22	35	13	1	0	675

AKZO N.V.

Patents By Year of Grant:	165	27	40	36	53	41	67	71	83	44	34	9	1	0	0	671
Patents By Year of Application:	236	39	47	45	62	65	64	56	41	14	2	0	0	0	0	671

SHARP KABUSHIKI KAISHA (SHARP CORPORATION)

Patents By Year of Grant:	34	16	28	27	29	25	37	59	53	65	54	44	62	65	73	671
Patents By Year of Application:	72	36	27	20	36	38	65	72	58	46	72	63	52	14	0	671

CHISSO CORPORATION

Patents By Year of Grant:	119	27	33	39	51	43	52	57	39	32	33	21	35	48	41	670
Patents By Year of Application:	165	38	49	66	45	55	25	37	27	30	38	43	39	12	1	670

ELF ATOCHEM NORTH AMERICA, INC.

Patents By Year of Grant:	258	22	33	43	37	39	34	44	32	25	23	22	13	25	20	670
Patents By Year of Application:	299	43	46	34	45	33	32	20	29	19	36	12	16	6	0	670

SYNTEX (U.S.A) INC.

Patents By Year of Grant:	241	43	38	40	44	34	29	36	38	14	33	23	13	24	20	670
Patents By Year of Application:	342	42	44	36	23	32	26	20	15	33	31	8	15	3	0	670

HUGHES AIRCRAFT COMPANY

Patents By Year of Grant:	174	31	30	26	37	32	38	31	39	74	48	33	25	11	0	629
Patents By Year of Application:	233	27	30	44	28	36	31	55	56	47	35	6	1	0	0	629

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	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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COMMISSARIAT A L'ENERGIE ATOMIQUE

Patents By Year of Grant:	263	41	47	29	31	28	18	18	18	17	8	23	22	30	35	628
Patents By Year of Application:	351	26	28	39	6	20	17	19	13	17	25	38	28	1	0	628

ADVANCED MICRO DEVICES, INC.

Patents By Year of Grant:	17	14	21	6	10	10	10	8	6	15	18	25	58	132	273	623
Patents By Year of Application:	47	12	7	8	15	7	3	14	13	30	80	138	201	45	3	623

ASAHI GLASS COMPANY, LTD.

Patents By Year of Grant:	162	22	29	21	19	23	38	32	34	35	27	36	35	49	51	613
Patents By Year of Application:	204	26	17	28	29	39	26	37	30	32	36	48	51	10	0	613

GTE PRODUCTS CORPORATION

Patents By Year of Grant:	229	59	53	60	49	40	52	34	22	8	3	1	0	0	1	611
Patents By Year of Application:	313	56	42	60	49	44	30	15	2	0	0	0	0	0	0	611

LUBRIZOL CORPORATION

Patents By Year of Grant:	159	27	28	35	26	29	32	24	31	49	28	33	30	46	30	607
Patents By Year of Application:	204	41	29	25	29	38	29	32	29	41	28	39	32	11	0	607

HENKEL CORPORATION

Patents By Year of Grant:	96	9	22	5	12	19	15	24	24	36	50	81	57	68	88	606
Patents By Year of Application:	124	9	10	15	17	25	23	33	54	66	76	86	54	13	1	606

BRIDGESTONE CORPORATION

Patents By Year of Grant:	136	18	18	26	31	31	26	36	43	34	42	44	32	40	48	605
Patents By Year of Application:	164	25	28	36	30	33	47	37	34	40	47	47	28	8	1	605

SAMSUNG ELECTRONICS CO., LTD.

Patents By Year of Grant:	0	0	1	2	1	8	18	24	35	42	39	36	75	148	176	605
Patents By Year of Application:	3	0	0	10	8	23	39	40	39	38	83	159	124	37	2	605

KIMBERLY-CLARK CORPORATION

Patents By Year of Grant:	68	20	34	42	56	43	21	33	31	36	42	90	68	14	6	604
Patents By Year of Application:	118	50	40	46	30	36	30	34	40	71	87	20	2	0	0	604

UNITED MICROELECTRONICS CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	2	7	40	112	111	68	82	182	604
Patents By Year of Application:	0	0	0	0	0	2	2	5	54	159	91	99	122	66	4	604

AJINOMOTO COMPANY INCORPORATED

Patents By Year of Grant:	136	22	31	24	27	20	30	25	32	39	34	42	36	52	51	601
Patents By Year of Application:	188	25	26	25	29	27	29	36	34	42	47	48	36	9	0	601

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	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
ZENECA LIMITED																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	38	81	108	93	137	134	591
Patents By Year of Application:	1	0	0	0	1	0	6	15	90	110	130	115	90	32	1	591
NOVO NORDISK A/S																
Patents By Year of Grant:	0	0	0	0	0	1	21	25	37	45	28	55	95	122	160	589
Patents By Year of Application:	0	1	5	4	16	31	32	39	49	67	140	65	109	28	3	589
NIPPON PAINT CO., LTD.																
Patents By Year of Grant:	89	11	11	22	37	36	37	32	60	54	55	42	33	33	27	579
Patents By Year of Application:	109	30	32	27	41	43	36	57	52	44	46	38	19	5	0	579
MITSUBISHI RAYON CO., LTD.																
Patents By Year of Grant:	143	14	37	40	38	39	50	59	42	37	18	20	8	6	22	573
Patents By Year of Application:	193	38	40	31	59	50	42	39	22	17	15	6	18	3	0	573
NIPPON OIL COMPANY LTD.																
Patents By Year of Grant:	200	19	18	24	17	27	25	30	25	35	38	34	28	34	19	573
Patents By Year of Application:	230	21	18	27	37	29	28	25	34	36	43	27	15	3	0	573
KURARAY CO., LTD.																
Patents By Year of Grant:	160	19	30	23	36	30	39	34	24	45	25	17	21	38	31	572
Patents By Year of Application:	209	30	25	35	33	44	18	32	26	25	24	31	30	10	0	572
UBE INDUSTRIES LTD.																
Patents By Year of Grant:	179	24	21	29	28	37	36	40	37	25	23	16	22	25	29	571
Patents By Year of Application:	221	27	30	32	37	43	33	27	16	25	23	25	26	6	0	571
DAIKIN INDUSTRIES LIMITED																
Patents By Year of Grant:	138	28	34	14	25	38	33	44	40	24	19	21	31	48	33	570
Patents By Year of Application:	190	29	20	24	48	40	33	28	21	29	41	30	30	7	0	570
NESTEC, S.A.																
Patents By Year of Grant:	16	15	20	28	34	28	32	44	45	31	44	40	33	60	99	569
Patents By Year of Application:	60	31	22	32	27	30	45	53	32	44	51	57	60	25	0	569
AGFA-GEVAERT, AG																
Patents By Year of Grant:	234	24	14	17	32	25	34	14	12	21	23	15	25	29	35	554
Patents By Year of Application:	268	18	27	28	24	22	16	10	19	30	32	22	30	8	0	554
WISCONSIN ALUMNI RESEARCH FOUNDATION																
Patents By Year of Grant:	114	11	7	17	19	12	25	26	34	29	32	49	43	65	71	554
Patents By Year of Application:	145	8	22	11	20	25	29	28	36	44	72	48	49	16	1	554

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Ranked List of Organizations with 200 or More Patents

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TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	0	3	3	7	10	21	57	101	153	195	550
Patents By Year of Application:	0	0	0	0	0	5	7	8	11	25	81	176	168	64	5	550

WACKER-CHEMIE GMBH

Patents By Year of Grant:	200	20	15	17	29	20	25	16	25	25	29	23	36	30	40	550
Patents By Year of Application:	229	16	17	37	20	18	13	23	35	37	25	32	32	15	1	550

GENENTECH, INC.

Patents By Year of Grant:	18	9	11	12	15	19	21	35	40	28	28	43	82	133	53	547
Patents By Year of Application:	59	7	20	16	19	34	29	28	45	77	169	19	23	2	0	547

ASHLAND OIL INC.

Patents By Year of Grant:	258	45	64	60	41	17	10	14	10	12	9	0	1	0	0	541
Patents By Year of Application:	349	62	43	32	13	12	9	7	10	4	0	0	0	0	0	541

MITSUBISHI CHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	344	34	47	49	46	13	3	1	2	1	0	0	1	0	0	541
Patents By Year of Application:	424	45	37	22	8	3	1	0	0	1	0	0	0	0	0	541

HOECHST-ROUSSEL PHARMACEUTICALS, INC.

Patents By Year of Grant:	94	21	25	40	42	52	57	36	64	25	20	50	7	2	1	536
Patents By Year of Application:	140	27	32	46	60	42	52	47	25	17	47	0	1	0	0	536

BETZ LABORATORIES INC.

Patents By Year of Grant:	81	5	23	34	38	44	35	71	55	45	50	47	4	0	0	532
Patents By Year of Application:	101	25	26	40	49	39	60	56	54	47	35	0	0	0	0	532

STERLING DRUG INC.

Patents By Year of Grant:	411	15	13	7	22	19	15	18	6	3	0	1	0	0	0	530
Patents By Year of Application:	441	10	9	10	23	24	12	0	0	0	1	0	0	0	0	530

KAWASAKI STEEL CORPORATION

Patents By Year of Grant:	88	22	27	16	29	30	33	30	34	48	34	32	33	33	36	525
Patents By Year of Application:	126	24	27	25	33	29	38	42	45	30	37	33	28	7	1	525

BAXTER INTERNATIONAL INC.

Patents By Year of Grant:	174	10	21	30	26	21	16	17	23	21	12	24	33	45	40	513
Patents By Year of Application:	213	27	21	19	24	11	18	22	25	26	44	30	29	4	0	513

KYOWA HAKKO KOGYO CO., LTD

Patents By Year of Grant:	92	14	31	15	26	25	36	39	29	32	23	31	43	36	38	510
Patents By Year of Application:	136	21	25	27	34	30	26	30	37	23	58	28	25	9	1	510

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ALZA CORPORATION

Patents By Year of Grant:	112	16	25	26	37	28	27	25	42	18	11	15	28	22	41	473
Patents By Year of Application:	145	28	35	31	25	25	31	35	19	26	29	14	22	6	2	473

BURROUGHS WELLCOME CO.

Patents By Year of Grant:	198	14	18	31	45	32	32	36	16	13	25	9	3	0	1	473
Patents By Year of Application:	253	21	33	34	37	19	25	17	19	13	2	0	0	0	0	473

MORTON THIOKOL, INC.

Patents By Year of Grant:	241	20	28	38	24	21	11	7	10	11	21	20	7	11	1	471
Patents By Year of Application:	286	34	26	20	18	13	6	9	24	22	8	4	0	1	0	471

ROCKWELL INTERNATIONAL CORPORATION

Patents By Year of Grant:	240	19	32	24	13	13	24	13	17	21	23	14	13	4	1	471
Patents By Year of Application:	286	26	13	18	20	19	19	14	19	16	18	2	0	1	0	471

CONOCO, INC.

Patents By Year of Grant:	316	18	10	15	12	21	22	13	9	7	5	8	4	5	3	468
Patents By Year of Application:	338	17	10	22	14	17	17	7	5	8	4	4	4	1	0	468

METALLGESELLSCHAFT AKTIENGESELLSCHAFT

Patents By Year of Grant:	213	10	16	19	26	25	15	27	20	14	24	13	16	16	11	465
Patents By Year of Application:	231	19	21	24	27	21	21	17	16	21	17	15	12	3	0	465

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

Patents By Year of Grant:	7	0	3	3	8	9	24	23	39	57	54	39	63	62	72	463
Patents By Year of Application:	9	2	6	12	14	26	33	42	61	44	71	61	64	17	1	463

SHIONOGI + CO. LTD.

Patents By Year of Grant:	184	23	23	15	20	32	19	32	21	14	23	17	16	11	13	463
Patents By Year of Application:	231	18	18	22	24	29	17	17	22	20	20	8	11	6	0	463

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

Patents By Year of Grant:	10	17	14	16	25	19	27	23	37	24	21	35	45	59	86	458
Patents By Year of Application:	37	17	19	21	31	35	29	25	27	51	68	55	41	2	0	458

EASTMAN CHEMICAL COMPANY

Patents By Year of Grant:	0	0	0	0	0	0	0	1	1	61	88	66	75	57	101	450
Patents By Year of Application:	1	0	0	0	0	1	6	17	74	79	108	58	59	44	3	450

MERRELL DOW PHARMACEUTICALS

Patents By Year of Grant:	37	20	16	37	37	46	56	52	48	30	49	22	0	0	0	450
Patents By Year of Application:	68	24	37	43	44	53	52	50	35	33	11	0	0	0	0	450

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(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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GENERAL FOODS CORPORATION

Patents By Year of Grant:	297	45	37	26	28	6	0	0	0	0	0	0	0	0	0	439
Patents By Year of Application:	363	34	24	17	1	0	0	0	0	0	0	0	0	0	0	439

SMITHKLINE BEECHAM CORPORATION

Patents By Year of Grant:	0	0	0	0	0	12	15	10	16	7	21	20	66	94	176	437
Patents By Year of Application:	0	0	0	9	15	16	7	14	19	39	79	54	151	31	3	437

BAYER CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	25	81	82	129	115	432
Patents By Year of Application:	0	0	1	0	0	1	4	1	18	59	119	100	99	27	3	432

NIPPON ZEON CO., LTD.

Patents By Year of Grant:	115	23	22	5	13	25	37	36	33	35	17	15	15	21	20	432
Patents By Year of Application:	155	9	11	30	30	41	32	27	28	9	24	15	17	4	0	432

NATIONAL RESEARCH DEVELOPMENT CORPORATION

Patents By Year of Grant:	222	26	29	17	34	23	29	29	14	2	1	0	1	1	1	429
Patents By Year of Application:	279	26	22	31	29	24	13	2	1	0	2	0	0	0	0	429

EISAI CO., LTD.

Patents By Year of Grant:	122	21	10	18	21	16	26	19	17	24	23	30	36	28	17	428
Patents By Year of Application:	159	18	17	16	25	23	17	21	18	26	56	13	17	2	0	428

TDK CORPORATION

Patents By Year of Grant:	18	38	31	30	22	10	13	23	30	19	30	43	37	40	44	428
Patents By Year of Application:	88	26	27	8	20	20	18	27	30	46	35	35	32	14	2	428

SANKYO COMPANY LIMITED

Patents By Year of Grant:	145	9	14	16	10	15	20	14	17	20	34	23	38	26	24	425
Patents By Year of Application:	172	15	13	14	14	19	9	23	29	33	44	15	19	6	0	425

DYNAMIT NOBEL AKTIENGESELLSCHAFT

Patents By Year of Grant:	335	22	25	13	8	4	3	1	3	3	2	1	1	2	0	423
Patents By Year of Application:	380	13	12	3	4	1	2	2	2	1	0	1	0	0	0	423

MONTEDISON S.P.A.

Patents By Year of Grant:	293	29	24	23	20	15	12	4	0	0	1	1	0	0	0	422
Patents By Year of Application:	337	27	22	17	12	4	2	0	0	0	1	0	0	0	0	422

APPLIED MATERIALS, INC.

Patents By Year of Grant:	6	2	2	4	3	9	7	21	27	36	36	43	40	76	108	420
Patents By Year of Application:	11	0	3	5	11	17	33	29	44	48	66	84	63	6	0	420

Technology Assessment and Forecast Report

CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	1	8	6	10	29	54	69	65	89	89	420
Patents By Year of Application:	0	0	0	0	5	7	10	12	45	67	79	112	78	5	0	420

COMBUSTION ENGINEERING INC.

Patents By Year of Grant:	204	20	14	14	18	9	9	13	37	37	15	7	10	7	5	419
Patents By Year of Application:	239	14	12	14	9	12	13	48	24	16	6	4	6	2	0	419

SANOFI, S.A.

Patents By Year of Grant:	50	21	23	18	21	30	29	25	22	7	22	27	47	42	32	416
Patents By Year of Application:	102	21	21	19	30	27	20	9	13	31	57	26	29	11	0	416

WESTVACO CORPORATION

Patents By Year of Grant:	112	13	14	22	22	18	28	31	24	17	20	23	22	25	21	412
Patents By Year of Application:	140	10	17	23	34	17	26	29	18	17	28	28	17	8	0	412

AKZO NOBEL NV

Patents By Year of Grant:	0	0	0	0	0	0	0	0	18	53	54	80	98	107	410	
Patents By Year of Application:	0	0	0	0	2	2	4	16	37	78	96	67	78	29	1	410

CIBA-GEIGY AG

Patents By Year of Grant:	329	17	17	15	9	5	4	1	2	1	2	1	4	1	1	409
Patents By Year of Application:	359	18	8	9	0	3	2	0	1	5	3	1	0	0	0	409

BASF WYANDOTTE CORPORATION

Patents By Year of Grant:	401	5	0	0	0	0	0	0	0	0	0	0	0	0	0	406
Patents By Year of Application:	406	0	0	0	0	0	0	0	0	0	0	0	0	0	0	406

HITACHI CHEMICAL COMPANY, LTD.

Patents By Year of Grant:	118	9	10	12	14	18	27	22	30	16	26	20	25	21	37	405
Patents By Year of Application:	136	11	15	22	24	18	28	21	25	26	26	24	21	8	0	405

ARCO CHEMICAL TECHNOLOGY, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	37	50	41	45	55	67	59	50	404	
Patents By Year of Application:	0	0	0	1	1	15	38	44	46	48	72	66	49	22	2	404

MITSUBISHI KASEI CORP.

Patents By Year of Grant:	0	0	0	2	16	65	55	65	62	67	49	14	3	3	1	402
Patents By Year of Application:	3	3	7	45	66	62	52	77	54	25	4	3	1	0	0	402

BP CHEMICALS LIMITED

Patents By Year of Grant:	58	17	21	24	28	27	26	32	22	18	20	22	24	31	28	398
Patents By Year of Application:	100	17	20	34	25	31	27	11	18	25	39	27	21	3	0	398

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CHEMICAL CLASSES (12-31-99)

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----- Ranked List of Organizations with 200 or More Patents -----

													200	or More Patents		
	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

STAMICARBON B.V.

Patents By Year of Grant:	238	6	20	20	31	23	22	13	13	9	2	1	0	0	0	398
Patents By Year of Application:	265	26	18	26	24	14	13	8	3	1	0	0	0	0	0	398

ALLERGAN, INC.

Patents By Year of Grant:	0	0	0	4	4	9	28	31	38	53	46	49	57	55	21	395
Patents By Year of Application:	0	4	5	6	22	37	32	56	50	56	46	48	29	3	1	395

MITSUBISHI CHEMICAL CORPORATION

Patents By Year of Grant:	0	0	0	0	1	0	0	0	0	22	87	84	104	97	395	
Patents By Year of Application:	0	0	1	0	0	0	2	1	19	81	97	99	77	18	0	395

GLAXO GROUP LIMITED

Patents By Year of Grant:	88	13	15	11	39	30	45	21	28	20	13	11	26	14	20	394
Patents By Year of Application:	122	15	32	28	40	26	22	24	12	15	34	11	11	2	0	394

INCYTE PHARMACEUTICALS, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	4	5	4	3	5	18	107	246	392
Patents By Year of Application:	0	0	1	0	0	4	4	6	0	10	20	81	187	72	7	392

ARMSTRONG WORLD INDUSTRIES, INC.

Patents By Year of Grant:	207	23	11	14	20	14	15	23	14	4	9	11	7	11	7	390
Patents By Year of Application:	239	12	18	22	19	16	15	6	6	12	10	5	9	1	0	390

CORNELL RESEARCH FOUNDATION INC.

Patents By Year of Grant:	61	4	13	9	12	18	18	30	21	23	26	31	37	45	42	390
Patents By Year of Application:	83	7	11	22	17	18	26	22	33	40	49	32	23	7	0	390

ICI AMERICAS INC.

Patents By Year of Grant:	125	19	21	17	47	61	51	18	10	10	2	3	1	1	1	387
Patents By Year of Application:	164	24	37	64	39	34	7	8	3	4	1	2	0	0	0	387

GULF RESEARCH AND DEVELOPMENT COMPANY

Patents By Year of Grant:	378	6	1	0	0	0	0	0	0	0	0	0	0	0	0	385
Patents By Year of Application:	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385

SHOWA DENKO KABUSHIKI KAISHA

Patents By Year of Grant:	97	8	7	19	17	30	25	22	21	25	20	16	26	26	26	385
Patents By Year of Application:	116	15	19	24	25	19	25	17	23	27	25	21	26	3	0	385

THE BRITISH PETROLEUM COMPANY P.L.C.

Patents By Year of Grant:	161	34	29	29	28	21	21	24	17	8	5	2	1	2	1	383
Patents By Year of Application:	217	27	34	25	16	22	21	10	4	3	1	1	1	1	0	383

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CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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OWENS-ILLINOIS INC.

Patents By Year of Grant:	339	29	8	1	0	0	0	0	0	1	0	0	0	1	379
Patents By Year of Application:	372	5	0	0	0	0	0	1	0	0	0	0	1	0	379

PETROLITE CORPORATION

Patents By Year of Grant:	267	16	11	8	9	10	14	14	3	5	9	6	3	1	0	376
Patents By Year of Application:	297	6	4	13	14	11	7	1	11	4	5	3	0	0	0	376

JANSSEN PHARMACEUTICA N.V.

Patents By Year of Grant:	106	7	8	13	20	20	24	14	20	10	14	30	42	25	21	374
Patents By Year of Application:	126	10	14	15	25	17	18	12	13	17	57	21	25	4	0	374

NABISCO, INC.

Patents By Year of Grant:	81	29	26	34	37	31	40	24	14	10	19	16	9	0	3	373
Patents By Year of Application:	154	21	24	28	49	20	19	11	18	14	12	0	2	1	0	373

OCCIDENTAL CHEMICAL CORPORATION

Patents By Year of Grant:	125	21	10	20	26	24	28	23	21	17	12	8	6	13	16	370
Patents By Year of Application:	170	10	13	25	33	21	27	13	14	11	6	8	10	9	0	370

KANSAI PAINT CO., LTD.

Patents By Year of Grant:	72	5	3	16	11	29	31	28	21	34	27	16	22	29	22	366
Patents By Year of Application:	84	8	12	30	26	28	28	22	31	19	22	34	16	6	0	366

NATIONAL STARCH AND CHEMICAL INVESTMENT HOLDING CORPORATION

Patents By Year of Grant:	0	0	0	0	0	26	39	25	31	32	38	41	40	41	52	365
Patents By Year of Application:	4	0	1	14	46	26	18	30	32	47	51	38	40	15	3	365

ADIR ET COMPAGNIE

Patents By Year of Grant:	8	14	3	8	12	14	16	37	41	37	45	33	46	28	22	364
Patents By Year of Application:	23	7	4	16	15	23	43	46	40	40	45	28	26	8	0	364

CIBA SPECIALTY CHEMICALS CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	21	162	180	363	
Patents By Year of Application:	0	0	0	0	0	0	2	2	6	1	32	109	153	57	1	363

CHEMISCHE WERKE HULS, AG

Patents By Year of Grant:	330	16	6	4	1	0	1	0	1	0	0	0	0	0	0	359
Patents By Year of Application:	355	2	0	1	0	1	0	0	0	0	0	0	0	0	0	359

MITSUBISHI JUKOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	90	19	25	17	16	16	11	18	18	18	18	24	27	23	19	359
Patents By Year of Application:	126	19	17	15	24	8	20	20	15	18	32	35	8	2	0	359

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CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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NISSAN CHEMICAL INDUSTRIES, LTD.

Patents By Year of Grant:	64	12	15	15	21	22	25	29	24	21	14	14	15	33	34	358
Patents By Year of Application:	91	22	17	19	24	27	25	24	13	16	18	21	30	11	0	358

PIONEER HI-BRED INTERNATIONAL, INC.

Patents By Year of Grant:	1	0	0	3	7	1	4	13	5	20	22	52	26	107	92	353
Patents By Year of Application:	2	1	3	10	17	5	6	17	25	28	76	58	58	47	0	353

AKZONA INCORPORATED

Patents By Year of Grant:	328	6	8	2	2	1	0	0	0	0	0	0	0	0	0	347
Patents By Year of Application:	344	1	2	0	0	0	0	0	0	0	0	0	0	0	0	347

RAYCHEM CORPORATION

Patents By Year of Grant:	117	24	22	21	37	19	22	16	16	7	12	7	6	12	9	347
Patents By Year of Application:	170	19	23	29	19	18	12	10	7	8	9	14	8	1	0	347

SANYO ELECTRIC CO., LTD.

Patents By Year of Grant:	29	13	16	18	18	12	19	16	28	26	30	23	38	22	39	347
Patents By Year of Application:	47	21	16	17	12	24	20	29	34	28	32	33	26	8	0	347

HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)

Patents By Year of Grant:	48	13	13	19	17	22	14	10	19	22	26	27	24	34	35	343
Patents By Year of Application:	74	16	14	23	24	6	17	19	24	29	36	32	28	1	0	343

KOBE STEEL LTD.

Patents By Year of Grant:	107	10	13	12	10	16	13	26	8	23	19	22	15	24	25	343
Patents By Year of Application:	130	13	11	12	14	21	17	15	20	25	18	28	17	2	0	343

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	58	4	3	8	7	10	16	20	26	31	35	28	26	30	39	341
Patents By Year of Application:	67	4	10	7	10	23	16	44	21	38	31	26	33	10	1	341

FARMITALIA CARLO ERBA, S.P.A.

Patents By Year of Grant:	114	20	17	16	29	13	13	16	22	27	26	19	6	1	0	339
Patents By Year of Application:	147	24	21	15	13	20	15	28	27	21	8	0	0	0	0	339

STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF

Patents By Year of Grant:	46	8	13	10	11	13	20	16	14	25	22	25	32	39	41	335
Patents By Year of Application:	78	9	9	15	15	16	17	22	32	42	39	20	21	0	0	335

DAINIPPON INK + CHEMICALS, INC.

Patents By Year of Grant:	78	11	27	13	22	37	23	16	16	22	11	11	11	16	20	334
Patents By Year of Application:	104	19	22	40	23	17	20	20	6	14	14	14	18	2	1	334

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CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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CALIFORNIA INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	80	13	12	6	16	14	13	15	9	13	8	12	24	57	38	330
Patents By Year of Application:	110	11	8	17	9	10	13	11	17	22	38	37	21	6	0	330

DOW CORNING TORAY SILICONE COMPANY LIMITED

Patents By Year of Grant:	0	0	0	0	0	4	13	30	30	45	32	38	33	40	63	328
Patents By Year of Application:	0	0	2	2	4	24	24	37	48	34	44	43	44	20	2	328

FIRESTONE TIRE & RUBBER CO.

Patents By Year of Grant:	251	23	14	21	17	0	0	0	0	0	0	0	0	0	0	326
Patents By Year of Application:	289	10	23	4	0	0	0	0	0	0	0	0	0	0	0	326

ENGELHARD CORPORATION

Patents By Year of Grant:	64	21	11	22	14	16	20	21	20	17	15	15	13	21	35	325
Patents By Year of Application:	100	24	7	14	15	21	23	18	13	19	16	23	23	9	0	325

NISSAN MOTOR COMPANY, LIMITED

Patents By Year of Grant:	148	15	6	16	9	13	10	18	18	5	15	8	14	14	14	323
Patents By Year of Application:	169	11	13	11	10	16	19	8	13	10	14	17	11	1	0	323

JOHNS HOPKINS UNIVERSITY

Patents By Year of Grant:	27	4	6	6	6	9	10	8	23	16	18	19	33	64	73	322
Patents By Year of Application:	42	3	8	13	12	9	15	15	23	36	71	37	27	11	0	322

JAPAN SYNTHETIC RUBBER CO., LTD.

Patents By Year of Grant:	108	11	8	13	17	22	19	17	18	19	14	17	18	17	2	320
Patents By Year of Application:	125	12	12	27	22	21	11	20	13	21	18	11	7	0	0	320

MURATA MANUFACTURING CO., LTD.

Patents By Year of Grant:	38	10	9	12	13	9	21	11	9	26	27	28	24	42	41	320
Patents By Year of Application:	55	13	11	13	16	9	10	15	28	40	30	36	31	12	1	320

ATOCHEM

Patents By Year of Grant:	12	22	19	29	32	31	26	41	39	21	13	15	9	4	3	316
Patents By Year of Application:	58	29	27	34	25	33	47	17	18	10	16	1	1	0	0	316

ISP INVESTMENTS INC.

Patents By Year of Grant:	0	0	0	0	0	0	13	66	70	50	25	14	32	24	22	316
Patents By Year of Application:	0	0	0	2	9	35	56	68	47	24	24	21	14	16	0	316

FUJI ELECTRIC CO., LTD.

Patents By Year of Grant:	25	4	11	7	17	26	17	28	18	18	24	31	25	29	35	315
Patents By Year of Application:	35	10	13	18	34	16	20	18	29	27	33	30	19	12	1	315

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CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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MITSUBISHI PAPER MILLS, LTD.

Patents By Year of Grant:	93	16	17	16	19	16	20	21	22	18	12	9	12	12	10	313
Patents By Year of Application:	124	16	16	18	23	19	24	14	13	8	14	10	14	0	0	313

UNIVERSITY OF PENNSYLVANIA

Patents By Year of Grant:	16	0	1	0	3	8	10	19	20	25	20	36	49	60	46	313
Patents By Year of Application:	17	1	5	12	10	12	21	25	31	67	44	34	29	5	0	313

NIPPONDENSO CO., LTD.

Patents By Year of Grant:	45	12	13	14	13	11	9	7	14	13	29	35	34	35	28	312
Patents By Year of Application:	67	15	15	10	8	8	15	15	26	30	44	49	10	0	0	312

PALL CORPORATION

Patents By Year of Grant:	51	9	13	9	20	17	4	18	22	28	36	27	28	17	13	312
Patents By Year of Application:	70	18	14	15	11	10	18	35	32	30	33	17	8	1	0	312

TOSOH CORPORATION

Patents By Year of Grant:	0	0	0	7	18	31	32	38	43	25	26	19	18	24	30	311
Patents By Year of Application:	0	5	12	31	31	41	39	29	26	24	18	27	25	3	0	311

SMITH KLINE & FRENCH LABORATORIES LTD.

Patents By Year of Grant:	204	14	20	14	14	11	11	8	6	6	2	0	0	0	0	310
Patents By Year of Application:	234	18	10	16	11	11	4	4	2	0	0	0	0	0	0	310

RESEARCH CORPORATION

Patents By Year of Grant:	223	26	28	10	14	4	3	1	0	0	0	0	0	0	0	309
Patents By Year of Application:	292	12	3	1	0	1	0	0	0	0	0	0	0	0	0	309

CHIRON CORPORATION

Patents By Year of Grant:	3	2	1	6	5	2	5	16	14	9	12	20	70	80	63	308
Patents By Year of Application:	12	5	11	5	9	15	12	6	21	46	134	19	11	2	0	308

ORTHO PHARMACEUTICAL CORPORATION

Patents By Year of Grant:	96	12	28	19	28	10	11	10	16	10	13	14	12	18	11	308
Patents By Year of Application:	140	18	17	15	11	15	11	7	23	8	16	8	15	3	1	308

SCM CORPORATION

Patents By Year of Grant:	272	29	7	0	0	0	0	0	0	0	0	0	0	0	0	308
Patents By Year of Application:	305	3	0	0	0	0	0	0	0	0	0	0	0	0	0	308

BEHRINGWERKE AKTIENGESELLSCHAFT

Patents By Year of Grant:	87	7	7	4	5	15	14	12	24	11	12	30	54	13	12	307
Patents By Year of Application:	105	5	11	17	13	14	13	13	20	35	52	6	3	0	0	307

Technology Assessment and Forecast Report

CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

Pre

1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 TOTAL

BATTELLE MEMORIAL INSTITUTE

Patents By Year of Grant:	90	12	11	11	20	10	16	22	17	6	15	12	14	22	28	306
Patents By Year of Application:	115	12	14	20	15	16	11	12	12	17	15	23	15	9	0	306

LUCENT TECHNOLOGIES INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	29	75	76	126	306	
Patents By Year of Application:	0	0	0	0	0	0	4	2	6	31	73	79	81	27	3	306

UNIVERSITY OF MINNESOTA, THE REGENTS OF

Patents By Year of Grant:	38	8	11	11	20	18	14	16	16	18	23	26	36	32	305	
Patents By Year of Application:	58	15	17	15	16	15	18	19	27	21	34	32	15	3	0	305

MINOLTA CAMERA CO., LTD.

Patents By Year of Grant:	47	6	13	10	32	37	16	15	15	13	11	10	11	36	32	304
Patents By Year of Application:	65	8	26	33	29	12	18	12	10	12	17	19	30	10	3	304

MILLIKEN RESEARCH CORPORATION

Patents By Year of Grant:	120	8	6	7	14	12	18	15	18	15	12	18	10	18	11	302
Patents By Year of Application:	135	4	7	22	12	19	16	17	9	16	16	11	13	5	0	302

IOWA STATE UNIVERSITY RESEARCH FOUNDATION INC.

Patents By Year of Grant:	51	6	7	5	15	15	22	15	16	23	18	22	22	35	28	300
Patents By Year of Application:	65	4	12	14	22	19	16	15	22	26	29	33	18	5	0	300

FRAMATOME ET CIE

Patents By Year of Grant:	39	13	23	26	18	15	27	33	29	14	18	10	9	20	5	299
Patents By Year of Application:	80	20	21	15	37	20	25	16	16	12	10	16	9	2	0	299

ELF ATOCHEM S.A.

Patents By Year of Grant:	0	0	0	0	0	0	0	3	23	23	36	37	46	61	68	297
Patents By Year of Application:	0	0	0	0	0	2	7	30	40	39	60	52	50	17	0	297

RICHTER GEDEON VEGYESZETI GYAR RT

Patents By Year of Grant:	157	21	20	17	16	6	9	20	9	6	5	7	0	1	0	294
Patents By Year of Application:	204	18	15	4	4	22	11	6	0	6	3	1	0	0	0	294

IDEMITSU PETROCHEMICAL COMPANY LTD.

Patents By Year of Grant:	11	4	9	10	18	23	31	28	35	32	10	19	14	26	23	293
Patents By Year of Application:	21	10	8	35	30	37	23	24	22	18	18	24	21	2	0	293

TH. GOLDSCHMIDT AG

Patents By Year of Grant:	97	9	10	6	17	14	18	22	15	13	15	16	12	12	17	293
Patents By Year of Application:	115	2	16	17	18	11	23	14	11	17	15	18	8	7	1	293

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CHEMICAL CLASSES (12-31-99)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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ROBERT BOSCH GMBH

Patents By Year of Grant:	103	7	5	6	7	2	8	5	10	17	18	19	26	21	25	279
Patents By Year of Application:	119	5	3	1	6	6	11	14	18	23	22	29	18	4	0	279

NORTON COMPANY

Patents By Year of Grant:	77	10	11	10	10	19	24	27	15	15	14	16	9	10	11	278
Patents By Year of Application:	102	8	9	19	23	25	20	14	11	10	11	11	13	2	0	278

UNIVERSITY OF FLORIDA BOARD OF REGENTS

Patents By Year of Grant:	26	5	6	12	26	21	24	31	19	14	18	13	22	20	21	278
Patents By Year of Application:	47	12	21	29	23	21	16	16	16	21	28	18	9	1	0	278

OTSUKA PHARMACEUTICAL CO., LTD.

Patents By Year of Grant:	68	9	7	11	15	9	19	10	15	11	18	21	28	21	12	274
Patents By Year of Application:	92	5	18	11	17	13	13	10	17	24	31	8	13	2	0	274

SANDOZ PHARMACEUTICALS CORP.

Patents By Year of Grant:	213	9	11	5	15	9	4	2	0	3	1	1	0	0	0	273
Patents By Year of Application:	232	8	8	11	6	2	1	1	3	1	0	0	0	0	0	273

BABCOCK & WILCOX COMPANY

Patents By Year of Grant:	85	9	9	10	10	8	16	16	19	11	20	28	22	7	1	271
Patents By Year of Application:	107	5	7	9	13	18	11	21	13	30	25	8	4	0	0	271

TEXACO CHEMICAL COMPANY

Patents By Year of Grant:	0	0	0	2	11	26	47	80	65	38	2	0	0	0	0	271
Patents By Year of Application:	1	1	2	25	38	70	57	47	30	0	0	0	0	0	0	271

AUSIMONT S.P.A.

Patents By Year of Grant:	0	1	5	22	33	16	11	12	26	21	23	25	29	19	27	270
Patents By Year of Application:	1	27	27	21	8	12	19	24	22	22	33	28	23	3	0	270

FIRMENICH SA

Patents By Year of Grant:	142	11	8	5	7	7	11	16	8	7	9	12	8	10	8	269
Patents By Year of Application:	158	6	6	7	8	10	14	8	8	11	12	8	9	4	0	269

TERUMO KABUSHIKI KAISHA (TERUMO CORPORATION)

Patents By Year of Grant:	33	12	16	19	17	24	18	42	35	14	5	15	12	3	4	269
Patents By Year of Application:	60	17	18	17	40	31	29	18	10	9	12	4	4	0	0	269

CENTRAL GLASS COMPANY, LIMITED

Patents By Year of Grant:	69	13	13	5	23	20	27	13	10	15	11	9	13	16	11	268
Patents By Year of Application:	88	10	20	18	23	17	10	17	14	9	16	18	7	1	0	268

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CHEMICAL CLASSES (12-31-99)

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----- Organizational Patenting

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	Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 TOTAL											
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GENCORP INC.

Patents By Year of Grant:	132	8	7	4	9	8	6	9	11	16	13	14	16	11	4	268
Patents By Year of Application:	142	6	9	8	7	7	17	9	15	21	11	11	5	0	0	268

TEXACO DEVELOPMENT CORPORATION

Patents By Year of Grant:	258	3	4	0	0	0	0	0	0	0	2	1	0	0	0	268
Patents By Year of Application:	263	2	0	0	0	0	0	0	1	2	0	0	0	0	0	268

ALCAN INTERNATIONAL LIMITED

Patents By Year of Grant:	24	18	14	9	21	24	30	41	17	19	17	11	4	6	9	264
Patents By Year of Application:	55	10	16	25	29	31	24	23	19	12	8	5	6	1	0	264

DIAMOND SHAMROCK CORPORATION

Patents By Year of Grant:	264	0	0	0	0	0	0	0	0	0	0	0	0	0	0	264
Patents By Year of Application:	264	0	0	0	0	0	0	0	0	0	0	0	0	0	0	264

LG SEMICON CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	17	55	87	105	264
Patents By Year of Application:	0	0	0	0	0	0	0	2	5	66	83	89	19	0	264

TANABE SEIYAKU CO. LTD.

Patents By Year of Grant:	70	13	10	12	15	13	14	7	23	9	14	15	14	26	9	264
Patents By Year of Application:	93	8	12	16	13	15	11	16	21	7	22	20	8	2	0	264

NKK CORPORATION

Patents By Year of Grant:	0	0	0	0	4	33	39	35	30	20	28	24	19	15	15	262
Patents By Year of Application:	0	0	0	15	44	42	27	25	29	33	21	13	10	3	0	262

PRODUITS CHIMIQUES UGINE KUHLMANN

Patents By Year of Grant:	245	5	2	4	1	1	2	0	0	0	0	0	0	0	0	260
Patents By Year of Application:	254	3	1	1	1	0	0	0	0	0	0	0	0	0	0	260

KIMBERLY-CLARK WORLDWIDE, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	60	102	95	257	
Patents By Year of Application:	0	0	0	0	0	0	1	0	1	7	61	87	83	17	0	257

YEDA RESEARCH AND DEVELOPMENT CO., LTD.

Patents By Year of Grant:	86	10	9	5	10	9	9	9	15	7	10	15	11	22	29	256
Patents By Year of Application:	114	7	13	4	14	10	7	10	15	12	23	13	11	3	0	256

ALCON LABORATORIES, INC.

Patents By Year of Grant:	20	8	8	5	8	5	9	8	10	15	28	34	50	18	29	255
Patents By Year of Application:	33	10	4	7	8	8	6	11	29	38	58	15	19	9	0	255

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Ranked List of Organizations with 200 or More Patents

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TOYO SODA MANUFACTURING CO., LTD.

Patents By Year of Grant:	157	16	26	24	17	8	3	1	3	0	0	0	0	0	0	255
Patents By Year of Application:	195	26	22	4	4	1	1	2	0	0	0	0	0	0	0	255

ELECTRIC POWER RESEARCH INSTITUTE, INC.

Patents By Year of Grant:	107	2	9	7	12	14	14	12	22	9	11	9	8	7	11	254
Patents By Year of Application:	119	7	8	17	13	13	22	11	7	13	6	8	7	3	0	254

CALGON CORPORATION

Patents By Year of Grant:	88	10	18	12	10	8	12	13	20	15	12	10	11	9	5	253
Patents By Year of Application:	117	11	8	10	6	17	14	27	8	6	13	12	4	0	0	253

CHINOIN GYOGYSZER ES VEGYESZETI TERMEKEK GYARA RT.

Patents By Year of Grant:	136	11	7	8	16	16	17	9	14	6	10	3	0	0	0	253
Patents By Year of Application:	158	16	7	16	15	11	10	8	5	6	1	0	0	0	0	253

JOHN WYETH & BROTHER, LTD.

Patents By Year of Grant:	144	11	9	17	9	7	11	7	7	5	5	5	10	5	1	253
Patents By Year of Application:	165	12	11	9	5	11	7	7	4	5	13	4	0	0	0	253

HITACHI METALS LTD.

Patents By Year of Grant:	41	6	8	10	12	18	20	29	15	19	13	17	7	17	19	251
Patents By Year of Application:	55	9	14	21	13	21	20	23	11	20	9	18	13	4	0	251

MICHIGAN STATE UNIVERSITY

Patents By Year of Grant:	10	7	2	1	1	5	8	16	12	19	14	28	31	51	46	251
Patents By Year of Application:	19	2	1	4	7	18	8	23	8	31	38	46	40	6	0	251

INSTITUT PASTEUR

Patents By Year of Grant:	31	3	7	4	8	6	14	8	12	13	6	14	29	42	51	248
Patents By Year of Application:	49	5	13	7	5	9	19	12	18	29	56	11	11	4	0	248

INTEL CORPORATION

Patents By Year of Grant:	32	2	6	11	10	7	5	17	20	14	14	15	19	23	53	248
Patents By Year of Application:	38	5	12	8	7	13	16	23	20	10	26	44	24	2	0	248

VANGUARD INTERNATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	21	50	98	79	248	
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	29	101	87	27	4	0	248

THE SCRIPPS RESEARCH INSTITUTE

Patents By Year of Grant:	0	0	0	0	0	0	0	9	28	24	36	27	26	56	41	247
Patents By Year of Application:	0	0	2	5	9	12	18	34	28	56	40	24	11	8	0	247

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CHEMICAL CLASSES (12-31-99)

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Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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KAO SOAP CO., LTD.

Patents By Year of Grant:	234	1	1	3	0	2	0	1	0	0	0	0	0	0	0	242
Patents By Year of Application:	240	1	0	0	0	1	0	0	0	0	0	0	0	0	0	242

MORTON INTERNATIONAL, INC.

Patents By Year of Grant:	0	0	0	0	0	6	15	20	21	21	24	29	32	35	39	242
Patents By Year of Application:	0	0	0	2	15	18	21	17	23	26	28	41	32	19	0	242

MITA INDUSTRIAL COMPANY LTD.

Patents By Year of Grant:	77	8	6	1	6	9	13	18	33	20	6	11	10	15	8	241
Patents By Year of Application:	91	3	2	7	15	28	21	20	10	8	17	8	7	4	0	241

UNILEVER PATENT HOLDINGS B.V.

Patents By Year of Grant:	0	0	1	4	12	26	29	22	26	36	23	17	12	19	13	240
Patents By Year of Application:	4	4	13	21	27	25	22	33	31	23	18	10	7	2	0	240

W. L. GORE ASSOCIATES, INC.

Patents By Year of Grant:	17	0	1	3	9	10	10	14	16	20	23	28	24	33	32	240
Patents By Year of Application:	22	1	7	10	11	9	12	18	20	33	32	50	13	2	0	240

INTERNATIONAL PAPER CO.

Patents By Year of Grant:	61	8	5	5	12	11	7	6	17	12	16	20	15	24	19	238
Patents By Year of Application:	74	5	8	15	6	6	15	15	22	19	23	14	16	0	0	238

NIPPON OIL AND FATS CO., LTD.

Patents By Year of Grant:	66	11	10	8	23	24	22	26	25	10	6	5	1	0	1	238
Patents By Year of Application:	85	12	16	26	25	25	23	12	6	3	4	0	1	0	0	238

UNIVERSITY OF MICHIGAN

Patents By Year of Grant:	18	7	0	4	8	12	6	11	10	15	18	13	42	34	40	238
Patents By Year of Application:	30	3	6	9	5	12	12	18	21	42	38	21	17	4	0	238

HALLIBURTON CO.

Patents By Year of Grant:	121	13	14	8	5	3	9	11	6	14	12	8	7	4	1	236
Patents By Year of Application:	141	11	7	5	6	5	13	10	13	10	8	4	3	0	0	236

SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S

Patents By Year of Grant:	58	12	11	9	3	8	14	16	11	14	14	9	13	20	22	234
Patents By Year of Application:	82	9	9	3	8	18	6	23	16	12	11	16	19	2	0	234

POLYPLASTICS CO., LTD.

Patents By Year of Grant:	11	4	6	12	20	25	23	31	38	12	11	12	4	13	11	233
Patents By Year of Application:	21	9	16	26	26	28	33	21	8	14	8	12	10	1	0	233

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CHEMICAL CLASSES (12-31-99)

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	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

SHIN-ETSU HANDOTAI CO., LTD.

Patents By Year of Grant:	2	0	0	1	6	9	12	15	20	16	19	15	24	37	55	231
Patents By Year of Application:	2	0	5	10	4	18	19	21	14	19	28	42	38	11	0	231

SOLVAY & CIE (SOCIETE ANONYME)

Patents By Year of Grant:	107	8	17	9	18	12	18	22	10	7	1	0	2	0	0	231
Patents By Year of Application:	133	12	16	11	16	21	12	7	0	1	2	0	0	0	0	231

SUNTORY LTD.

Patents By Year of Grant:	8	4	14	18	19	10	18	21	15	20	16	7	15	19	27	231
Patents By Year of Application:	32	20	13	16	17	12	21	18	17	13	17	18	15	2	0	231

SWISS ALUMINIUM LTD.

Patents By Year of Grant:	177	16	12	4	11	7	3	1	0	0	0	0	0	0	0	231
Patents By Year of Application:	199	12	5	9	4	1	1	0	0	0	0	0	0	0	0	231

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)

Patents By Year of Grant:	16	13	22	17	20	17	16	16	21	8	9	11	12	12	20	230
Patents By Year of Application:	57	22	14	16	12	18	19	7	11	15	20	8	7	4	0	230

ENIRICERCHE S.P.A.

Patents By Year of Grant:	0	0	4	11	20	16	27	28	30	22	16	16	16	11	13	230
Patents By Year of Application:	0	12	21	22	20	30	22	21	25	18	19	11	7	2	0	230

LANXIDE TECHNOLOGY COMPANY, LP

Patents By Year of Grant:	0	0	1	1	31	18	27	31	31	24	20	18	17	9	2	230
Patents By Year of Application:	0	17	13	22	25	26	22	33	24	23	21	2	2	0	0	230

S. C. JOHNSON + SON, INC.

Patents By Year of Grant:	51	12	9	11	26	15	8	13	6	6	5	8	12	18	29	229
Patents By Year of Application:	68	15	16	15	14	14	7	7	5	6	16	20	21	5	0	229

TOYODA GOSEI KABUSHIKI KAISHA

Patents By Year of Grant:	14	13	13	14	13	15	6	12	17	15	21	12	16	25	23	229
Patents By Year of Application:	34	14	16	9	13	9	23	13	16	21	22	20	16	3	0	229

KERNFORSCHUNGSSANLAGE JULICH GMBH

Patents By Year of Grant:	146	14	23	16	9	11	5	3	1	0	0	0	0	0	0	228
Patents By Year of Application:	192	12	8	8	6	1	0	1	0	0	0	0	0	0	0	228

TOA NENRYO KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	90	15	31	16	28	19	14	12	2	0	1	0	0	0	0	228
Patents By Year of Application:	127	26	21	28	12	6	6	1	1	0	0	0	0	0	0	228

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1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 TOTAL

DE SOTO, INC.

Patents By Year of Grant:	153	18	16	14	15	8	3	0	0	0	0	0	0	0	0	227
Patents By Year of Application:	178	23	8	11	6	1	0	0	0	0	0	0	0	0	0	227

MEAD CORPORATION

Patents By Year of Grant:	75	13	6	13	24	26	13	16	13	9	5	2	5	3	4	227
Patents By Year of Application:	95	6	24	20	22	14	19	8	2	6	7	1	3	0	0	227

RESEARCH CORPORATION TECHNOLOGIES, INC.

Patents By Year of Grant:	0	0	1	3	5	2	8	11	23	16	25	12	48	51	21	226
Patents By Year of Application:	4	1	6	6	8	15	11	28	25	39	64	13	4	2	0	226

BOC GROUP, INC.

Patents By Year of Grant:	4	6	7	9	23	15	15	15	21	11	16	24	19	19	21	225
Patents By Year of Application:	12	9	14	20	16	19	16	14	12	27	27	17	17	5	0	225

ROCKEFELLER UNIVERSITY

Patents By Year of Grant:	15	4	9	11	6	7	11	22	21	13	9	8	20	35	34	225
Patents By Year of Application:	29	10	10	5	10	19	22	18	8	29	32	15	13	5	0	225

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

Patents By Year of Grant:	79	4	7	7	4	3	7	3	3	19	13	11	10	22	32	224
Patents By Year of Application:	91	6	5	4	5	8	6	9	18	14	23	19	16	0	0	224

NATIONAL SCIENCE COUNCIL

Patents By Year of Grant:	0	0	0	0	3	7	5	4	15	14	25	33	37	42	38	223
Patents By Year of Application:	0	0	1	4	5	7	9	15	23	34	48	31	41	5	0	223

RHONE-POULENC SPECIALITIES CHIMIQUES

Patents By Year of Grant:	69	29	43	38	21	10	5	2	2	3	0	0	0	1	0	223
Patents By Year of Application:	132	58	14	6	5	2	3	3	0	0	0	0	0	0	0	223

LSI LOGIC CORPORATION

Patents By Year of Grant:	0	1	1	2	1	0	0	1	7	16	19	32	41	46	55	222
Patents By Year of Application:	1	1	3	0	0	2	7	12	17	35	51	46	42	5	0	222

NIPPON SHOKUBAI KAGAKU KOGYO CO. LTD.

Patents By Year of Grant:	53	7	14	19	19	26	21	28	18	9	2	3	2	1	0	222
Patents By Year of Application:	72	20	15	25	25	32	17	5	5	3	2	1	0	0	0	222

SUMITOMO METAL INDUSTRIES CO., LTD.

Patents By Year of Grant:	70	9	9	5	11	7	10	11	9	16	14	10	8	15	18	222
Patents By Year of Application:	89	7	6	9	11	9	9	13	13	15	10	15	12	4	0	222

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
COLUMBIA UNIVERSITY																
Patents By Year of Grant:	9	6	4	11	11	8	5	12	11	12	10	17	22	41	42	221
Patents By Year of Application:	29	8	12	11	9	7	11	11	13	27	30	35	14	4	0	221
NIPPON TELEGRAPH & TELEPHONE CORP.																
Patents By Year of Grant:	87	12	10	11	14	9	9	4	14	13	8	9	10	8	3	221
Patents By Year of Application:	108	10	12	11	10	6	9	9	17	8	10	6	4	1	0	221
SYNTHELABO S.A.																
Patents By Year of Grant:	69	6	14	5	13	15	12	7	12	8	18	15	11	7	8	220
Patents By Year of Application:	81	9	15	12	16	7	7	11	13	17	16	6	4	6	0	220
THOMSON-CSF																
Patents By Year of Grant:	108	5	16	15	4	8	7	7	12	11	9	3	5	2	8	220
Patents By Year of Application:	126	13	7	9	9	7	10	11	9	4	5	5	4	1	0	220
UNIROYAL CHEMICAL COMPANY, INC.																
Patents By Year of Grant:	0	11	19	21	19	23	16	18	12	12	5	18	16	11	19	220
Patents By Year of Application:	30	18	10	31	18	20	5	12	8	16	13	15	18	5	1	220
MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V																
Patents By Year of Grant:	78	7	4	10	7	8	9	4	6	8	10	8	11	18	30	218
Patents By Year of Application:	92	9	8	13	5	2	9	5	11	9	27	17	9	2	0	218
NIPPON SHOKUBAI CO., LTD.																
Patents By Year of Grant:	0	0	0	0	0	0	1	7	21	24	23	23	29	40	49	217
Patents By Year of Application:	0	0	0	0	1	3	22	25	23	24	38	32	45	4	0	217
UNITED STATES OF AMERICA, DEPARTMENT OF THE INTERIOR																
Patents By Year of Grant:	142	5	3	3	5	2	8	8	6	7	8	9	4	1	5	216
Patents By Year of Application:	149	5	3	3	4	10	5	7	7	9	7	2	4	0	1	216
UNITIKA LTD.																
Patents By Year of Grant:	68	11	15	7	9	5	10	10	8	13	8	15	11	13	13	216
Patents By Year of Application:	91	11	9	5	7	10	8	13	10	18	11	9	13	1	0	216
RICHARDSON-VICKS INC.																
Patents By Year of Grant:	132	7	3	5	5	9	9	3	2	2	3	5	12	15	3	215
Patents By Year of Application:	143	4	5	6	8	6	3	1	6	3	13	5	11	1	0	215
LINDE AKTIENGESELLSCHAFT																
Patents By Year of Grant:	112	8	23	10	10	9	7	7	1	3	8	3	6	6	1	214
Patents By Year of Application:	141	13	12	6	5	6	5	5	5	2	5	8	1	0	0	214

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 1999)

Ranked List of Organizations with 200 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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BOEHRINGER INGELHEIM, GMBH

Patents By Year of Grant:	171	1	0	0	0	3	4	5	9	3	2	3	6	3	2	212
Patents By Year of Application:	172	0	0	2	4	5	7	4	3	4	8	1	2	0	0	212

HARRIS CORP.

Patents By Year of Grant:	46	9	12	8	11	15	7	10	11	8	12	11	22	15	15	212
Patents By Year of Application:	62	8	14	9	12	11	9	13	10	13	24	13	10	4	0	212

MEIJI SEIKA KAISHA LTD.

Patents By Year of Grant:	86	3	4	8	9	11	13	7	10	10	11	3	15	12	10	212
Patents By Year of Application:	96	5	8	10	11	10	13	6	10	9	12	10	8	4	0	212

TORAY SILICONE COMPANY, LTD.

Patents By Year of Grant:	85	15	18	25	23	21	21	3	1	0	0	0	0	0	0	212
Patents By Year of Application:	106	21	26	29	28	2	0	0	0	0	0	0	0	0	0	212

RHONE-POULENC RORER, S.A.

Patents By Year of Grant:	0	0	0	0	0	0	0	2	6	14	20	22	59	51	36	210
Patents By Year of Application:	0	0	0	0	1	1	3	14	22	23	64	36	38	7	1	210

WASHINGTON UNIVERSITY

Patents By Year of Grant:	7	1	5	5	8	4	15	14	12	14	14	14	18	34	45	210
Patents By Year of Application:	14	5	10	4	15	11	11	20	21	20	25	33	17	4	0	210

THE CLOROX COMPANY

Patents By Year of Grant:	15	5	9	14	18	18	13	18	14	12	12	11	8	24	18	209
Patents By Year of Application:	27	17	16	18	20	12	14	13	8	11	19	18	9	7	0	209

UNITED KINGDOM ATOMIC ENERGY AUTHORITY

Patents By Year of Grant:	125	17	9	9	13	7	10	1	7	4	2	5	0	0	0	209
Patents By Year of Application:	151	13	7	8	10	1	8	2	4	1	4	0	0	0	0	209

CHURCH + DWIGHT CO., INC.

Patents By Year of Grant:	7	1	2	2	2	4	0	6	25	30	39	28	20	19	23	208
Patents By Year of Application:	10	2	2	4	0	0	18	24	50	27	32	16	17	6	0	208

TOKYO ELECTRON LIMITED

Patents By Year of Grant:	0	0	0	0	1	4	1	7	21	26	20	20	22	30	56	208
Patents By Year of Application:	0	0	1	1	2	4	23	20	31	24	23	27	43	9	0	208

HAYASHIBARA BIOCHEMICAL LABORATORIES INCORPORATED

Patents By Year of Grant:	31	7	2	9	13	5	7	7	5	6	9	21	18	28	39	207
Patents By Year of Application:	50	7	8	6	2	7	5	5	13	19	34	13	32	6	0	207

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	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

DU PONT MERCK PHARMACEUTICAL COMPANY

Patents By Year of Grant:	0	0	0	0	0	0	18	29	30	29	25	28	25	18	4	206
Patents By Year of Application:	1	0	2	6	13	29	19	38	26	31	20	18	3	0	0	206

GENETICS INSTITUTE, INC.

Patents By Year of Grant:	2	0	3	6	12	8	13	9	12	13	15	14	27	39	33	206
Patents By Year of Application:	10	12	9	9	12	11	13	12	16	17	29	33	20	3	0	206

WILLIAM WRIGLEY JR. COMPANY

Patents By Year of Grant:	7	2	4	4	9	15	10	41	19	21	26	22	8	5	13	206
Patents By Year of Application:	13	1	7	13	14	22	28	27	22	25	18	8	6	2	0	206

J. M. HUBER CORPORATION

Patents By Year of Grant:	87	6	4	3	11	7	16	16	14	11	2	7	4	9	8	205
Patents By Year of Application:	99	1	7	2	19	14	19	10	6	4	4	9	8	3	0	205

AGENCE NATIONALE DE VALORISATION DE LA RECHERCHE (ANVAR)

Patents By Year of Grant:	193	1	2	4	1	2	1	0	0	0	0	0	0	0	0	204
Patents By Year of Application:	199	2	1	1	0	1	0	0	0	0	0	0	0	0	0	204

BASF LACKE & FARBEN AG

Patents By Year of Grant:	0	0	0	7	8	10	14	12	20	34	22	21	18	30	8	204
Patents By Year of Application:	1	4	9	7	20	16	16	24	25	31	23	20	7	1	0	204

ISIS PHARMACEUTICALS, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	2	5	2	8	29	42	39	77	204
Patents By Year of Application:	0	0	0	0	0	4	4	13	21	40	35	31	24	28	4	204

NIPPON PETROCHEMICALS COMPANY, LIMITED

Patents By Year of Grant:	28	11	16	16	18	11	18	13	21	17	8	7	5	7	7	203
Patents By Year of Application:	59	12	14	24	15	11	20	14	7	8	5	5	9	0	0	203

GIST-BROCADES N.V.

Patents By Year of Grant:	64	5	11	3	3	11	11	12	12	15	12	8	11	16	8	202
Patents By Year of Application:	82	6	6	8	15	10	14	12	10	18	14	4	3	0	0	202

MCDONNELL DOUGLAS CORP.

Patents By Year of Grant:	85	6	8	4	3	3	5	6	6	12	6	5	13	17	23	202
Patents By Year of Application:	100	5	3	4	5	10	6	8	2	9	12	17	19	2	0	202

TRW INC.

Patents By Year of Grant:	99	6	10	7	5	2	3	9	7	13	5	7	5	12	12	202
Patents By Year of Application:	113	8	4	5	3	4	10	10	4	9	8	13	6	5	0	202

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Pre

	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
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KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO

Patents By Year of Grant:	49	12	9	11	11	11	6	11	9	3	11	12	15	13	18	201
Patents By Year of Application:	67	10	12	12	8	8	10	5	11	13	14	14	13	4	0	201

Other Organizations (41330)

Patents By Year of Grant:	59616	6643	7611	7788	9660	9268	9993	10756	11263	11137	11701	12626	15064	19059	21108	223293
Patents By Year of Application:	73843	7830	8720	9454	10353	10410	10411	11533	12550	14742	19433	15430	14286	4110	188	223293